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# Capture Locations of Rare Fish in the Upper Colorado River System

Ecology Consultants, Inc, Fort Collins, CO

Prepared for

Fish and Wildlife Service, Fort Collins, CO Western Energy and Land Use  
Team

Dec 78

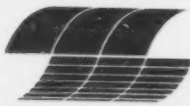
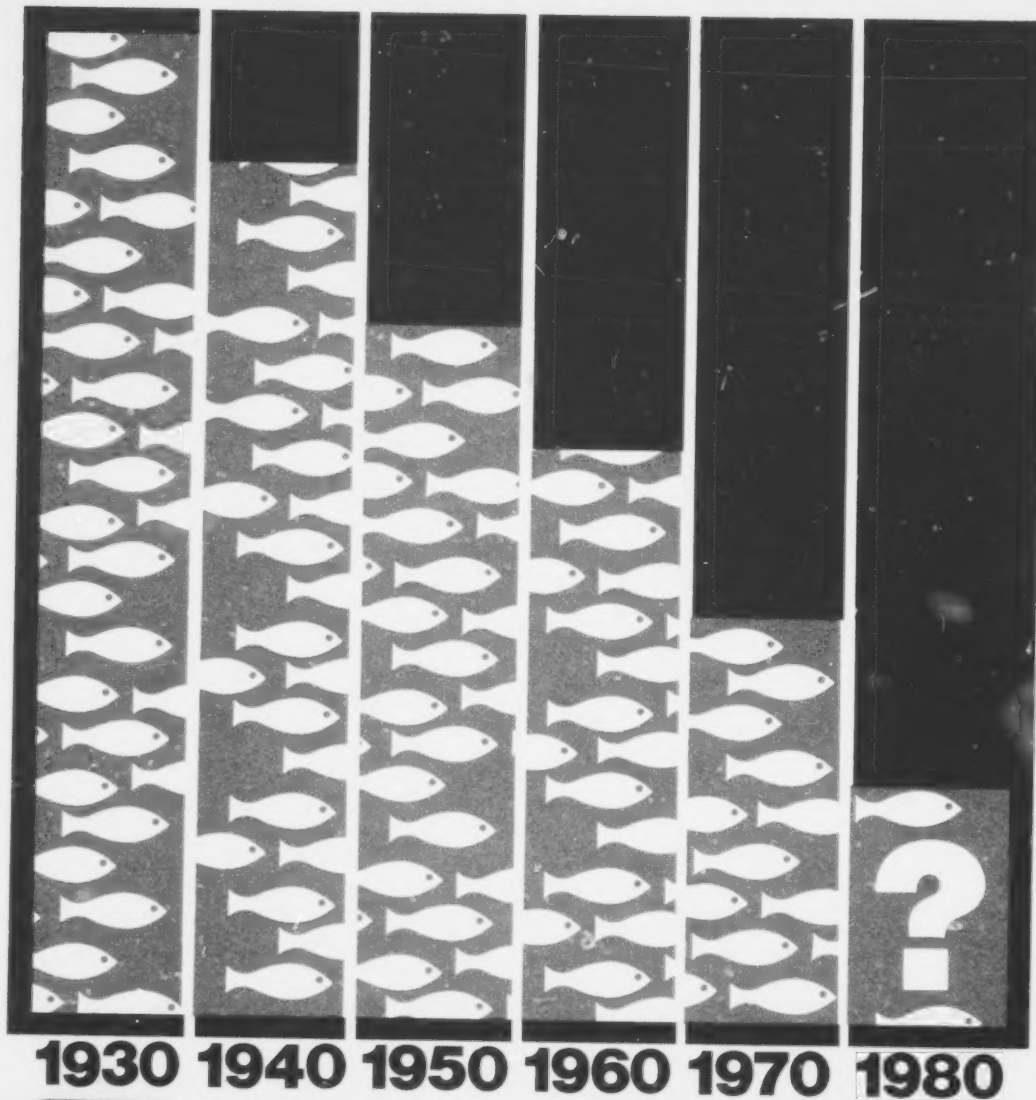
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| 16. Abstract (Limit: 200 words)<br><br>This report is a compilation of information regarding the distribution of the following species in the upper Colorado River system: Colorado cutthroat trout ( <u>Salmo clarki pleuriticus</u> ), Kendall Warm Springs dace ( <u>Rhinichthys osculus thermalis</u> ), Colorado squawfish ( <u>Ptychocheilus lucius</u> ), humpback sucker ( <u>Xyrauchen texanus</u> ), bonytail chub ( <u>Gila elegans</u> ), and humpback chub ( <u>Gila cypha</u> ). State-specific capture locations of the fish are plotted for Colorado, Utah, Wyoming and New Mexico. |  |                                                  | 13. Type of Report & Period Covered                                                                                          |                                             |
| 17. Document Analysis a. Descriptors<br>Colorado cutthroat trout ( <u>Salmo clarki pleuriticus</u> )<br>Kendall warm springs dace ( <u>Rhinichthys osculus thermalis</u> )<br>Colorado Squawfish ( <u>Ptychocheilus lucius</u> )<br>humpback sucker ( <u>Xyrauchen texanus</u> )<br><br>b. Identifiers/Open-Ended Terms<br>Colorado River System<br>Colorado<br>Utah<br>Wyoming<br>New Mexico<br>c. COSATI Field/Group                                                                                                                                                                              |  |                                                  | 14.<br><br>bonytail chub ( <u>Gila elegans</u> )<br>humpback chub ( <u>Gila cypha</u> )<br>species distribution<br>rare fish |                                             |
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Biological Services Program

FWS/OBS-78/32 December 1978

**Capture Locations of Rare Fish in the  
Upper Colorado River System**



Interagency Energy-Environment Research and Development Program  
Office of Research and Development • U. S. Environmental Protection Agency

Fish and Wildlife Service

U.S. Department of the Interior

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The Biological Services Program was established within the U.S. Fish and Wildlife Service to supply scientific information and methodologies on key environmental issues which have an impact fish and wildlife resources and their supporting ecosystems. The mission of the Program is as follows:

1. To strengthen the Fish and Wildlife Service in its role as a primary source of information on natural fish and wildlife resources, particularly with respect to environmental impact assessment.
2. To gather, analyze, and present information that will aid decision-makers in the identification and resolution of problems associated with major land and water use changes.
3. To provide better ecological information and evaluation for Department of the Interior development programs, such as those relating to energy development.

Information developed by the Biological Services Program is intended for use in the planning and decisionmaking process, to prevent or minimize the impact of development on fish and wildlife. Biological Services research activities and technical assistance services are based on an analysis of the issues, the decisionmakers involved and their information needs, and an evaluation of the state-of-the-art to identify information gaps and determine priorities. This is a strategy to assure that the products produced and disseminated will be timely and useful.

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Coal extraction and conversion

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Water resource analysis, including stream alterations and western water allocation

Coastal ecosystems and Outer Continental Shelf development.

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FWS/OBS-78/32  
December 1978

CAPTURE LOCATIONS OF RARE  
FISH IN THE UPPER  
COLORADO RIVER SYSTEM

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Performed for

Western Energy and Land Use Team  
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Fish and Wildlife Service  
U.S. DEPARTMENT OF THE INTERIOR

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DISCLAIMER

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## TABLE OF CONTENTS

|                            | <u>Page</u> |
|----------------------------|-------------|
| Map Page Key . . . . .     | iv          |
| Acknowledgements . . . . . | v           |
| Introduction . . . . .     | 1           |
| Maps . . . . .             | 2           |
| Literature Cited . . . . . | 41          |

Page Number Key for Capture Location  
Maps by Species and State

| Species                   | Colorado              | Utah               | Wyoming | New Mexico |
|---------------------------|-----------------------|--------------------|---------|------------|
| Colorado Cutthroat Trout  | 19,20 21,22           | 39                 | 2,3,4,5 |            |
| Bonytail Chub             | 6,7,8                 | 23,24,25,26        | 3       |            |
| Colorado Squawfish        | 12,13,14,15,<br>16,40 | 30,31,32,33,<br>34 | 4       | 40         |
| Humpback Chub             | 9,10,11               | 27,28,29           |         |            |
| Humpback Sucker           | 17,18                 | 35,36,37,38        |         |            |
| Kendall Warm Springs Dace |                       |                    | 2       |            |

#### ACKNOWLEDGEMENTS

Acknowledgements are gratefully extended to individuals who had major roles with this publication. Dr. Timothy W. Joseph was responsible for administering the tedious ECI portion of the work involving identifying capture location publications and mapping the information. Gwen Anderson, a participant in the Young Adult Conservation Corps Program (YACC), finalized drafting work for the maps. Amy Welden, another YACC participant, provided final editorial expertise. Appreciation is also expressed for the time consuming review assistance provided by Albert W. Heggen, James E. Johnson, Paul Holden, William Miller and David Langlois.

## INTRODUCTION

Energy and water project developments being considered for the upper Colorado River system have the potential to impact fish species which are of special concern. There is a need for information relating to fish in the system so that impacts of proposed developments may be evaluated and mitigating measures for adverse impacts may be devised. Information relating to fish of special concern is sparse because of the relative inaccessibility of the area and difficult field sampling conditions.

In this document information is compiled regarding the distributions of the following species in the upper Colorado River system: Colorado cutthroat trout (Salmo clarki pleuriticus), Kendall Warm Springs dace (Rhinichthys osculus thermalis), Colorado squawfish (Ptychocheilus lucius), humpback sucker (Xyrauchen texanus), bonytail chub (Gila elegans), and humpback chub (Gila cypha). State-specific capture locations of the fish are plotted for Colorado, Utah, Wyoming and New Mexico.

Authors reporting captures are indicated numerically on the maps, and there is keying to the reference section of the document. For example, for Colorado cutthroat trout and Kendall Warm Springs dace in Wyoming on page 2, the entry of number 7 indicates that Binns (1977) reported capturing trout within the indicated area. Caution should be exercised when interpreting the data. It should not be assumed that present distributions are identical to those historically reported because habitat changes could have occurred.

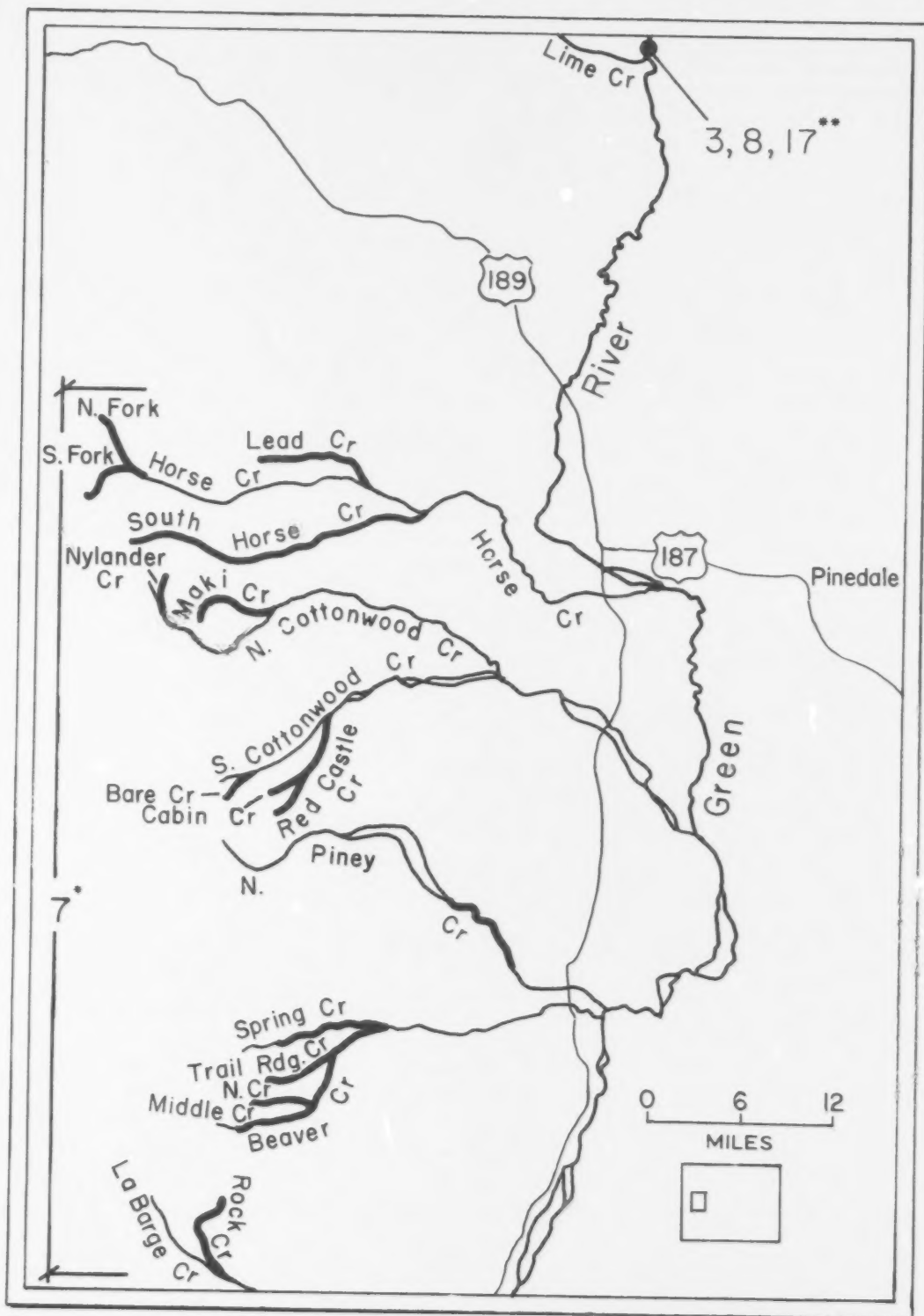


Figure 1. Capture Location Map for Colorado cutthroat trout and Kendall Warm Springs dace in Wyoming. \* Heavy lines are for trout capture locations. \*\* Entries 3, 8, 17 are for dace reportings.

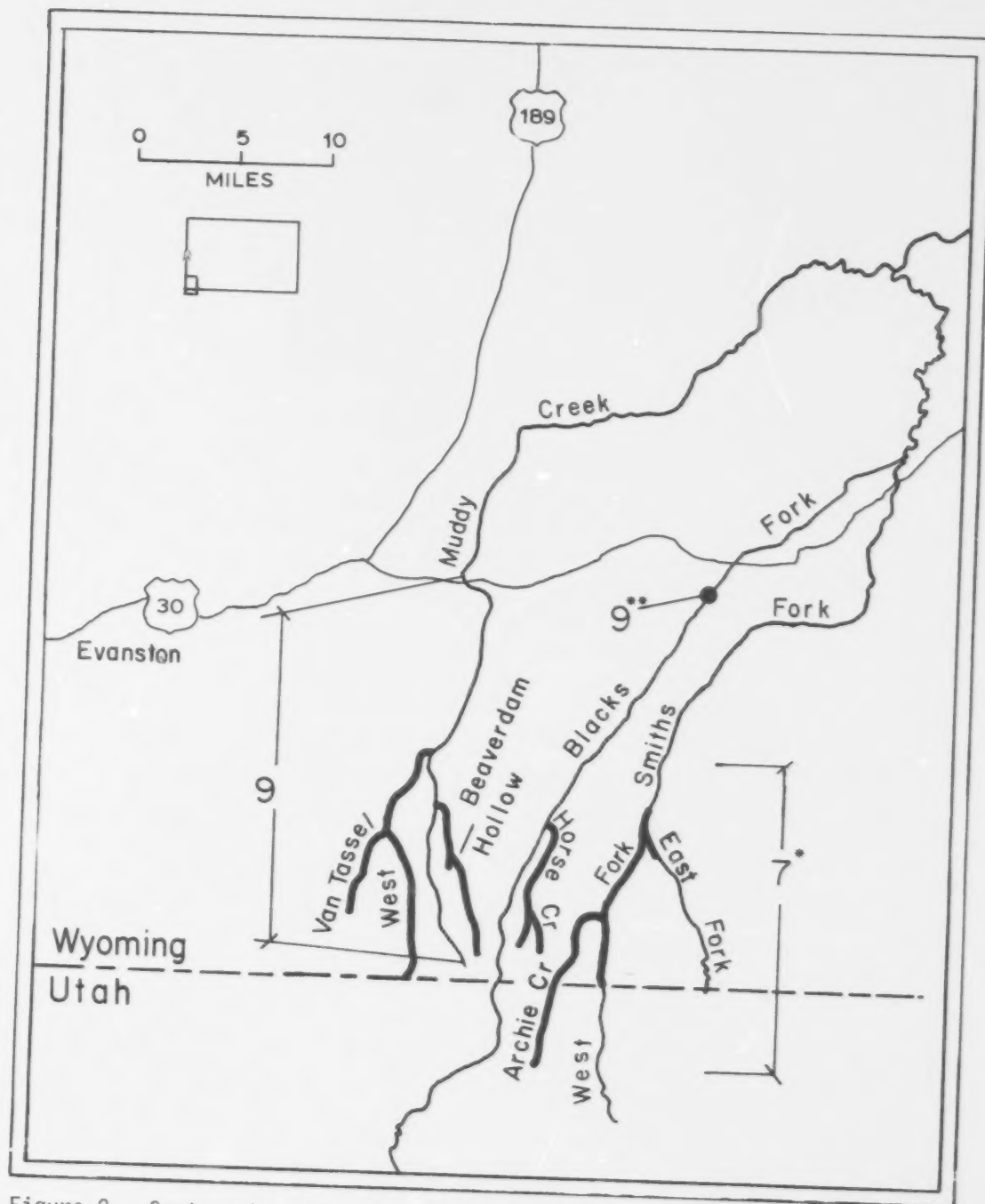


Figure 2. Capture Location Map for bonytail chub and Colorado cutthroat trout in southwest Wyoming. \* Author 7 (heavy lined) reportings are for trout in upper tributaries. There is overlap of reportings by Author 9 in the Muddy Creek drainage. \*\* Bonytail chub capture locations.

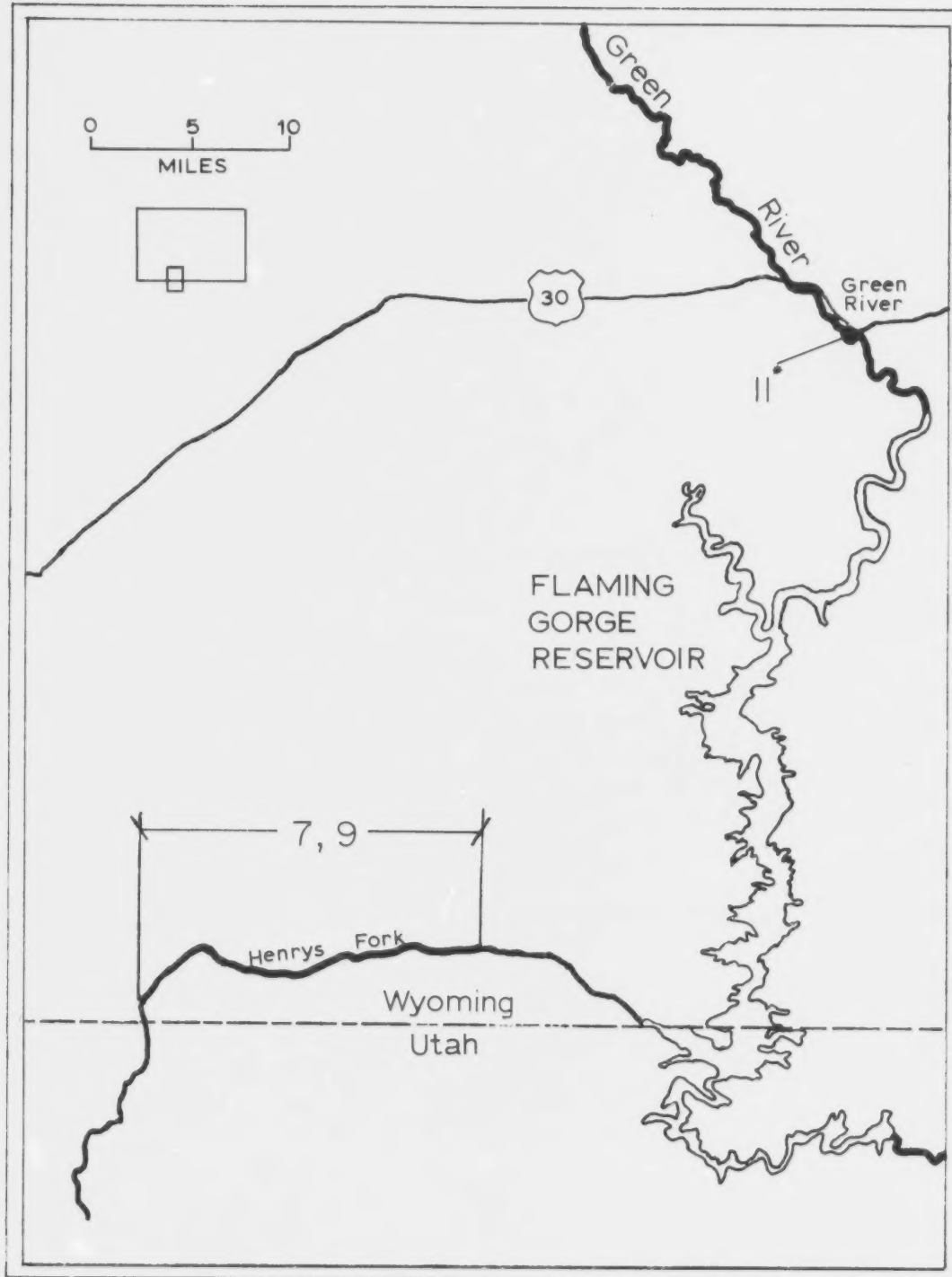


Figure 3. Capture Location Map for Colorado squawfish and Colorado cutthroat trout in the vicinity of Flaming Gorge Reservoir in Wyoming. \* Colorado squawfish capture location.

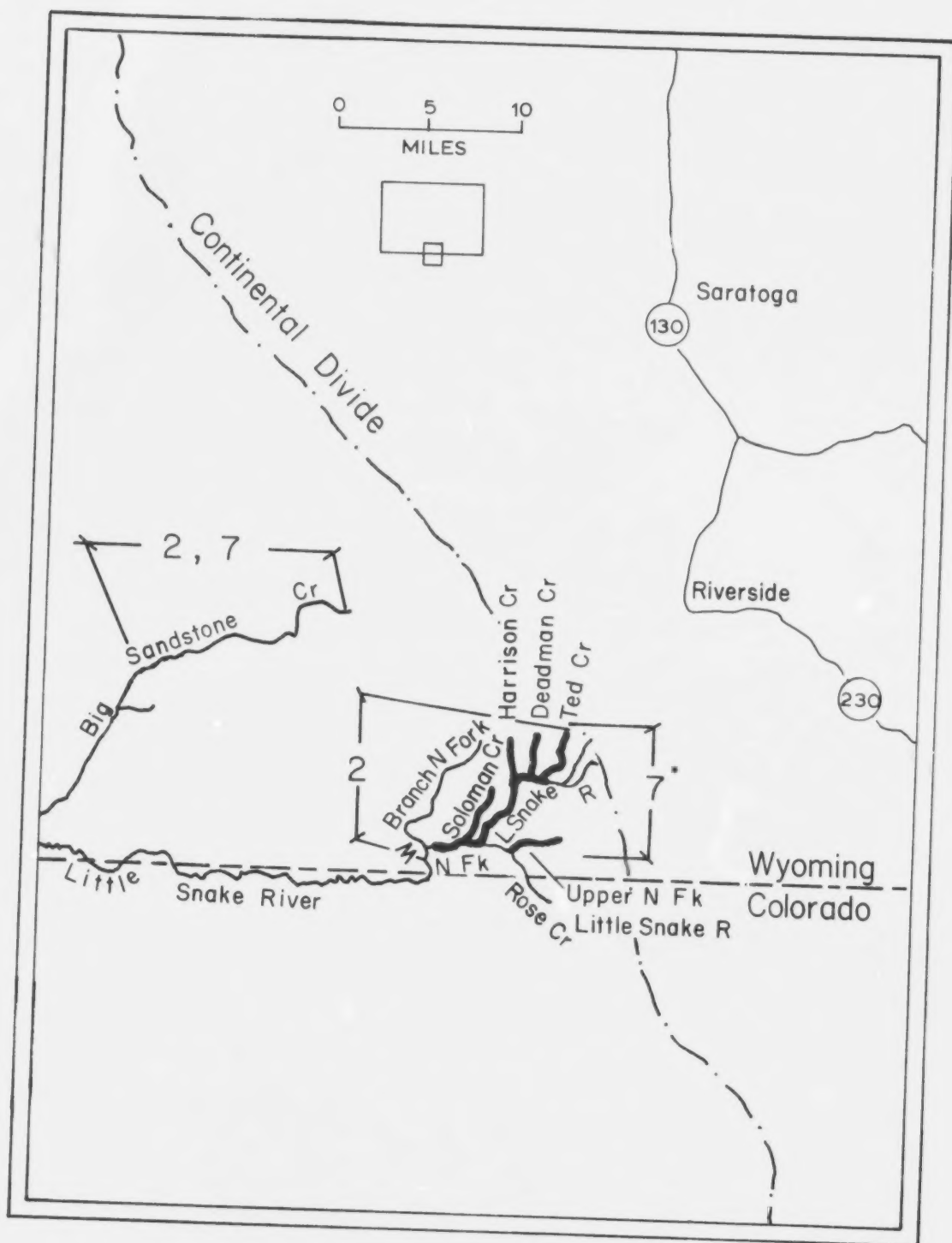


Figure 4. Capture Location Map for Colorado cutthroat trout in south central Wyoming. \* Heavy lines for Author 7 reportings. Author 2 locations overlap in the same area.

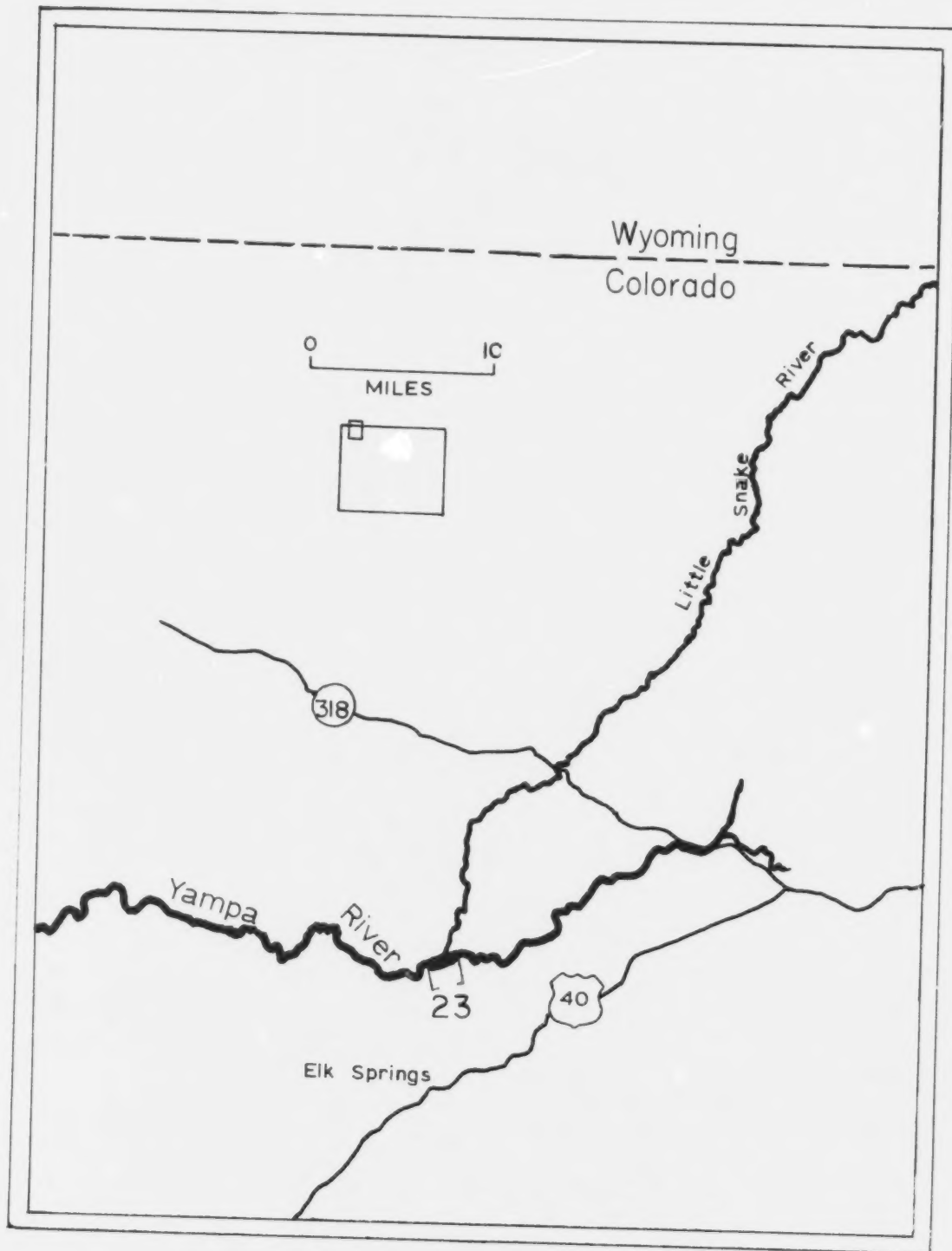


Figure 5. Capture Location Map for bonytail chub in Colorado on the Yampa River at the confluence of the Little Snake River.

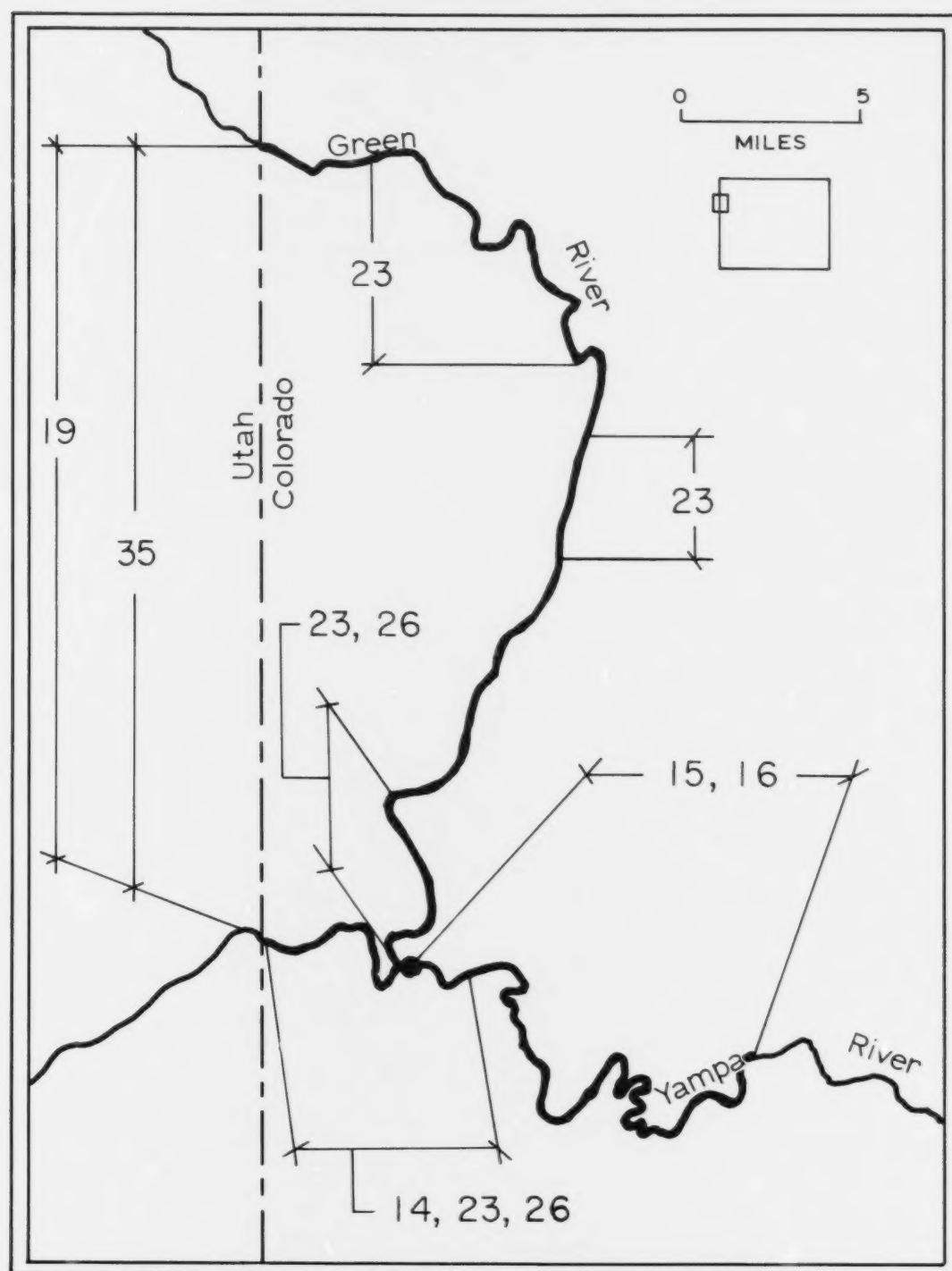


Figure 6. Capture Location Map for bonytail chub near the confluence of the Green and Yampa Rivers in Colorado.

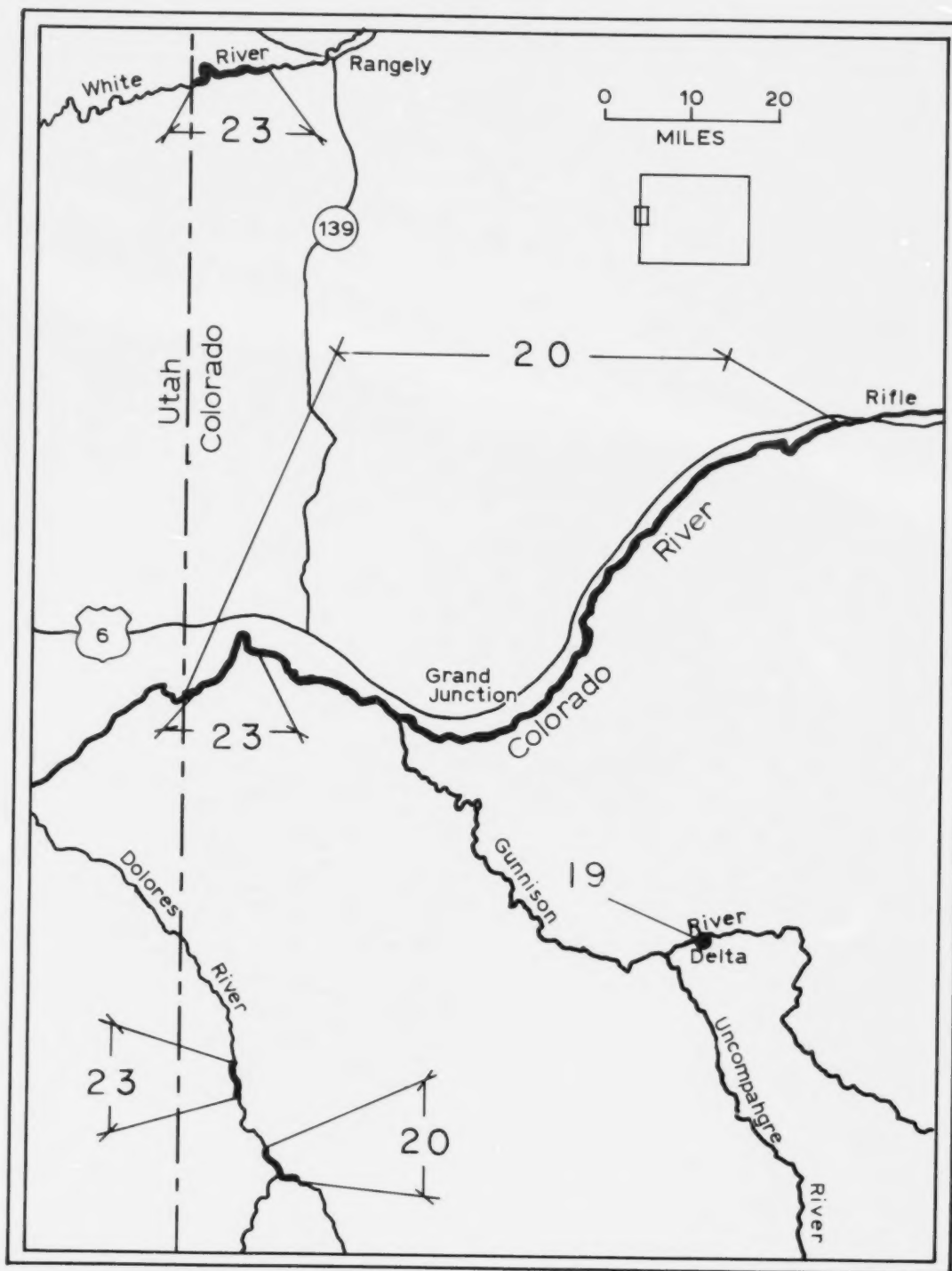


Figure 7. Capture Location Map for bonytail chub in the White, Colorado, Gunnison and Dolores Rivers of Colorado.

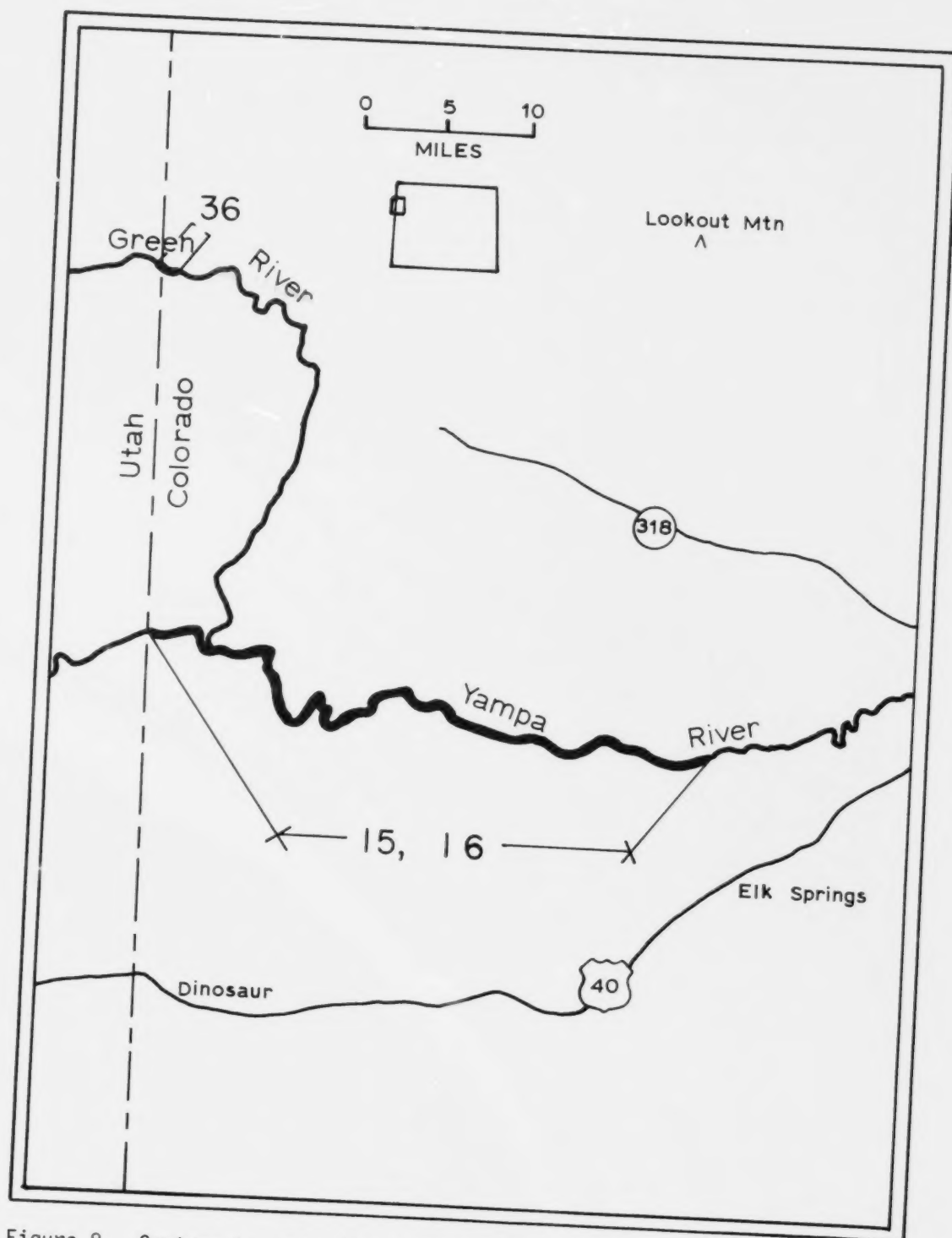


Figure 8. Capture Location Map for humpback chub in the Yampa River of Colorado.

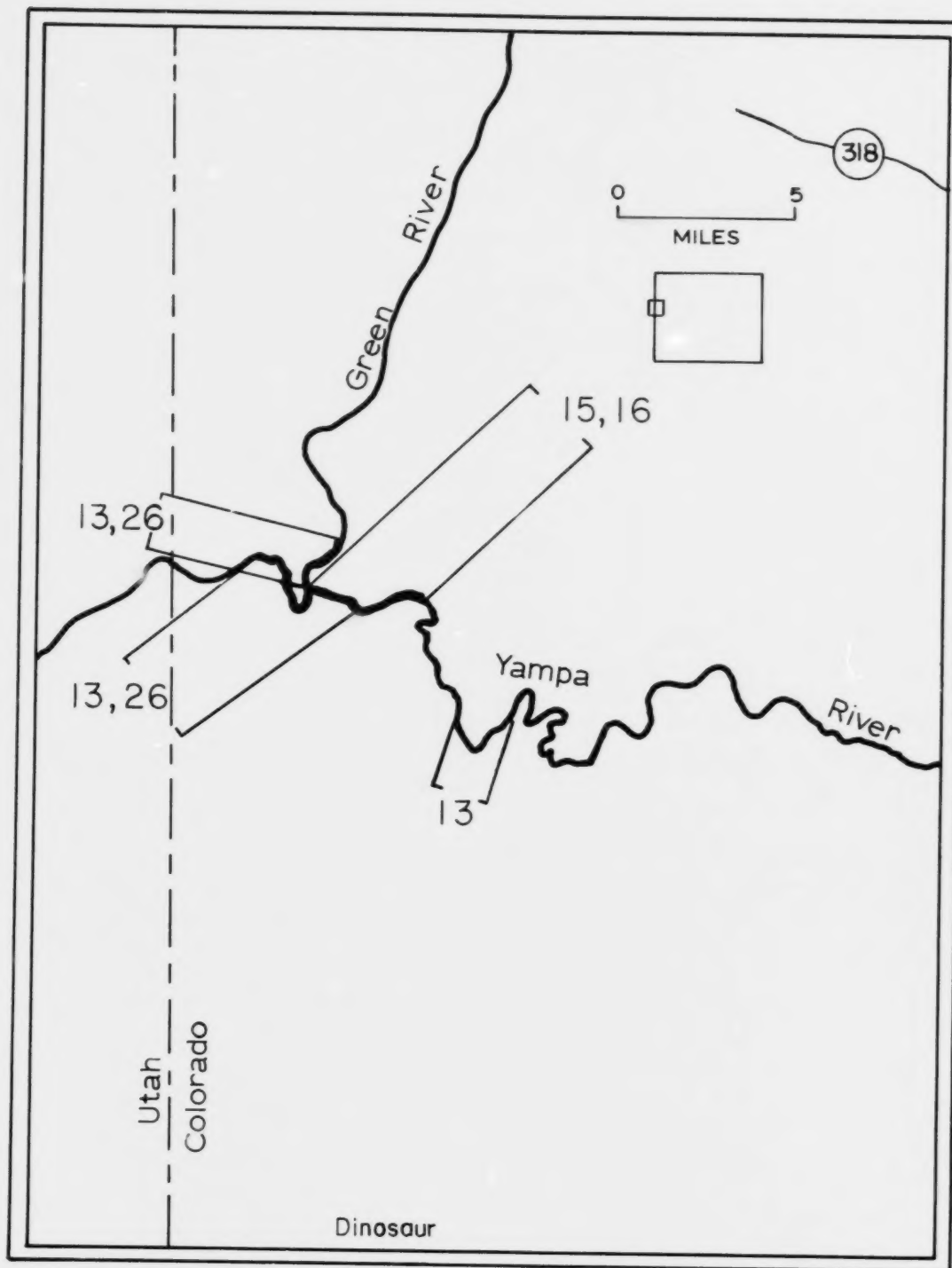


Figure 9. Capture Location Map for humpback chub near the confluence of the Green and Yampa Rivers in Colorado

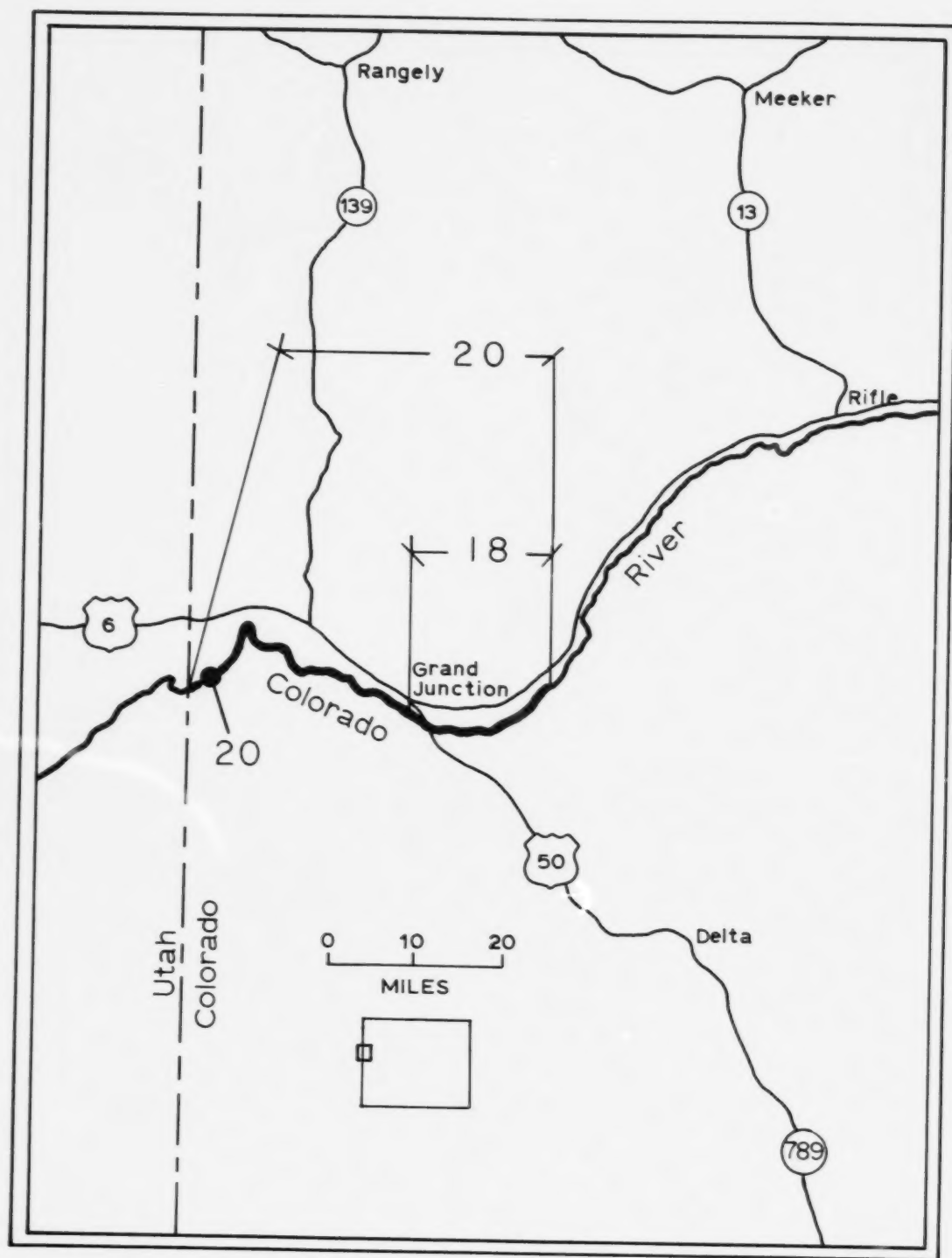


Figure 10. Capture Location Map for humpback chub on the Colorado River in vicinity of Grand Junction, Colorado.

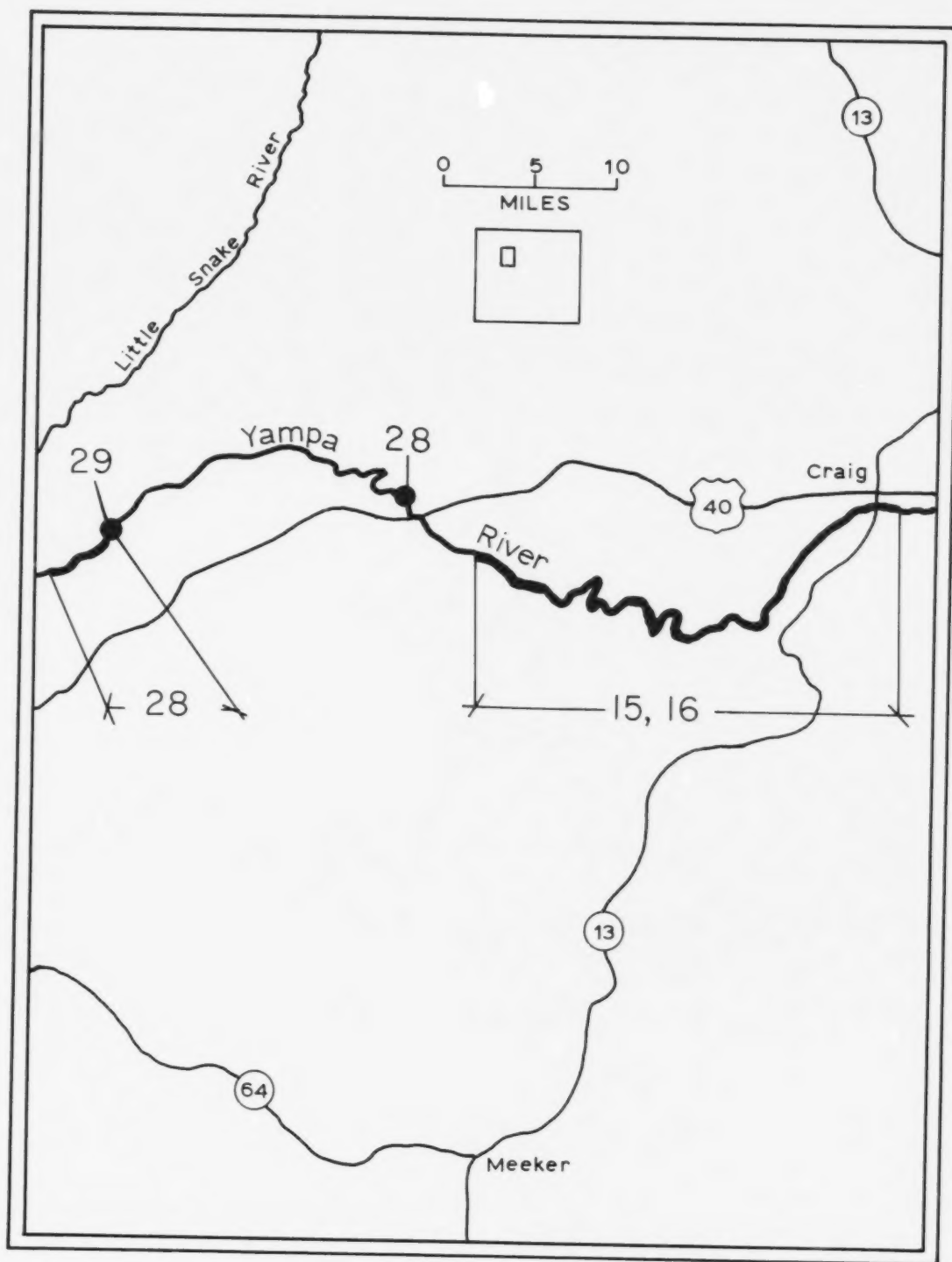


Figure 11. Capture Location Map for Colorado squawfish in the Yampa River between Craig, Colorado, and the Little Snake River.

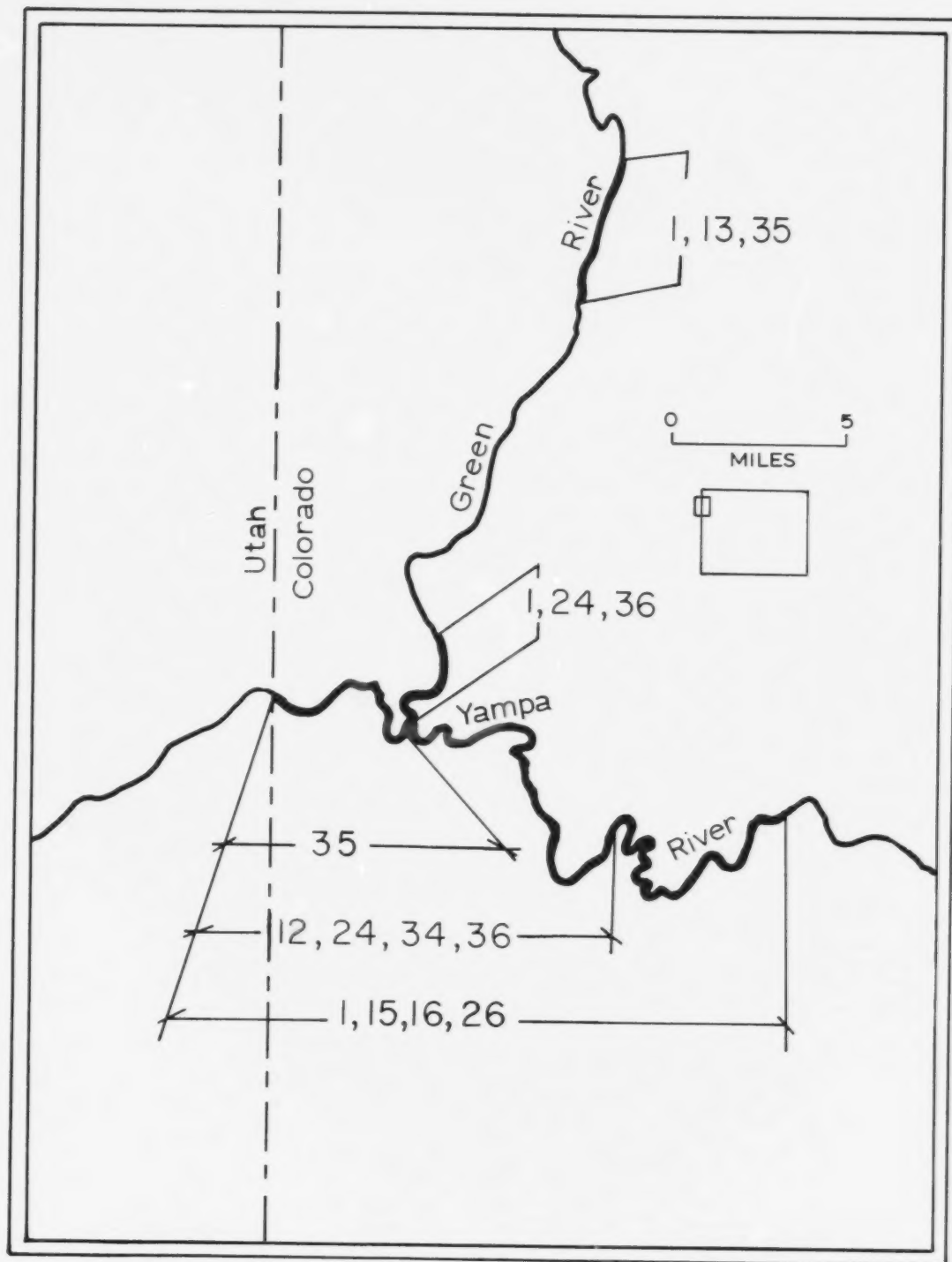


Figure 12. Capture Location Map for Colorado squawfish near the confluence of the Green and Yampa Rivers in Colorado.

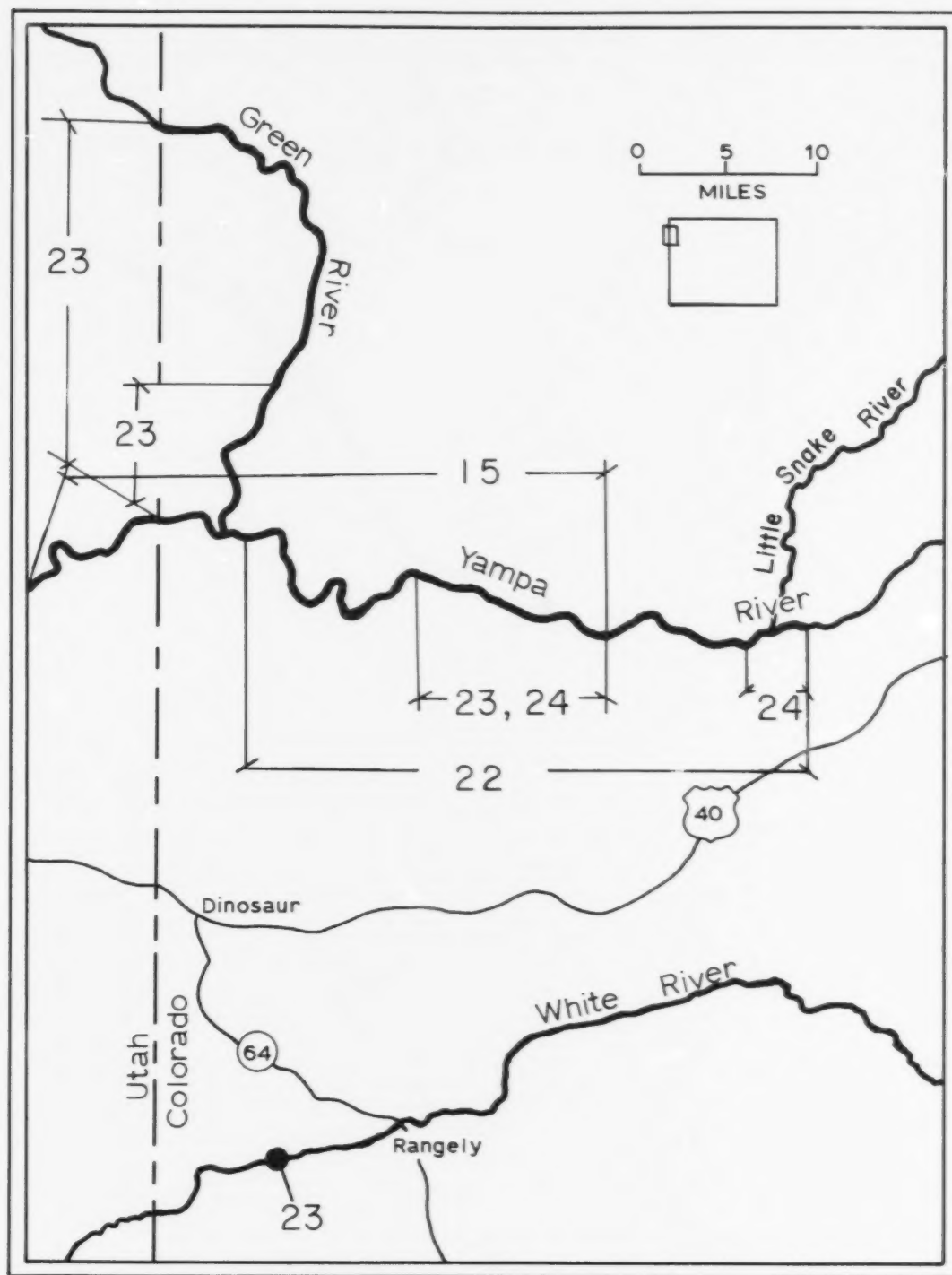


Figure 13. Capture Location Map for Colorado squawfish in the Green, Yampa and White Rivers of Colorado.

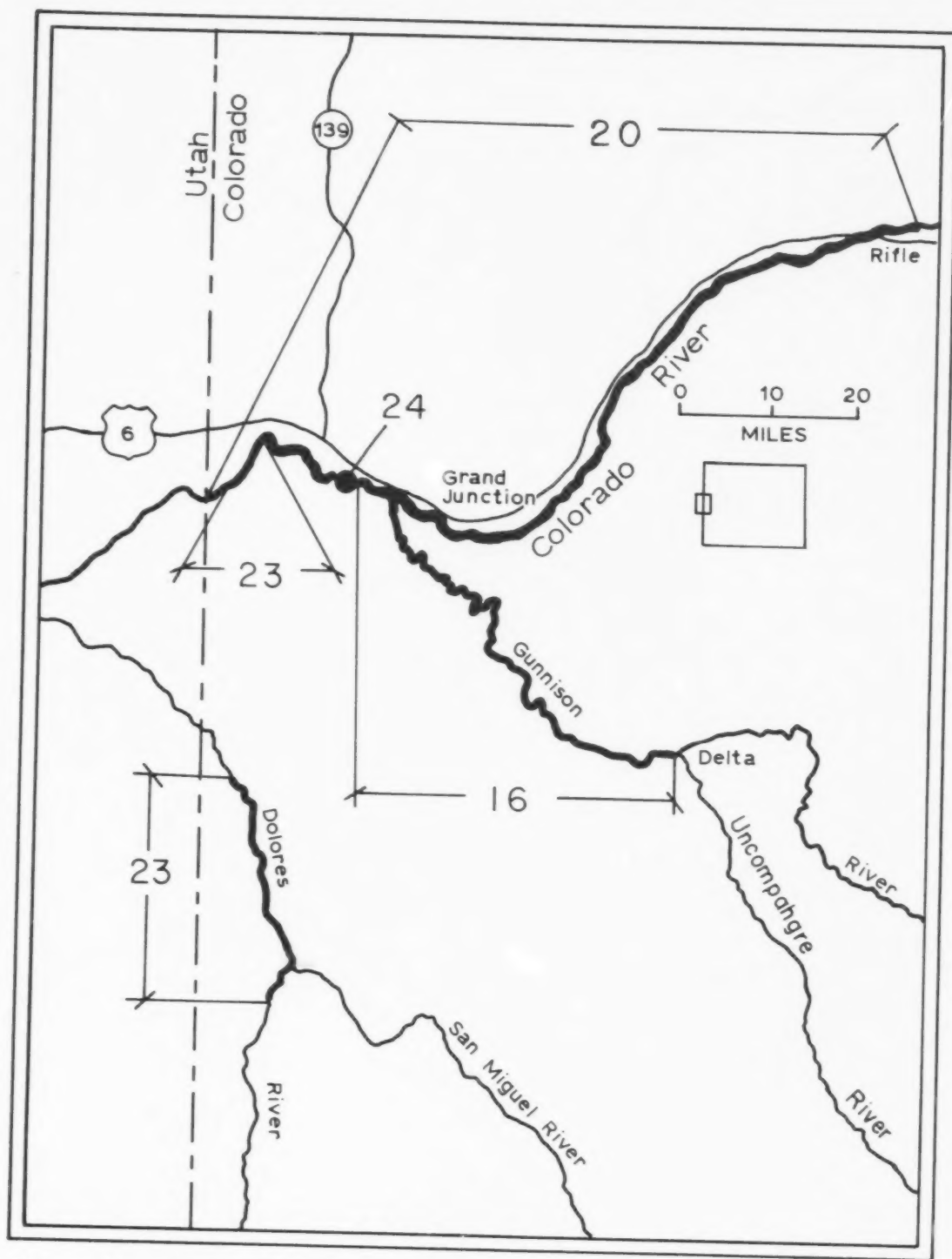


Figure 14. Capture Location Map for Colorado squawfish in the Colorado, Gunnison and Dolores Rivers in Colorado.

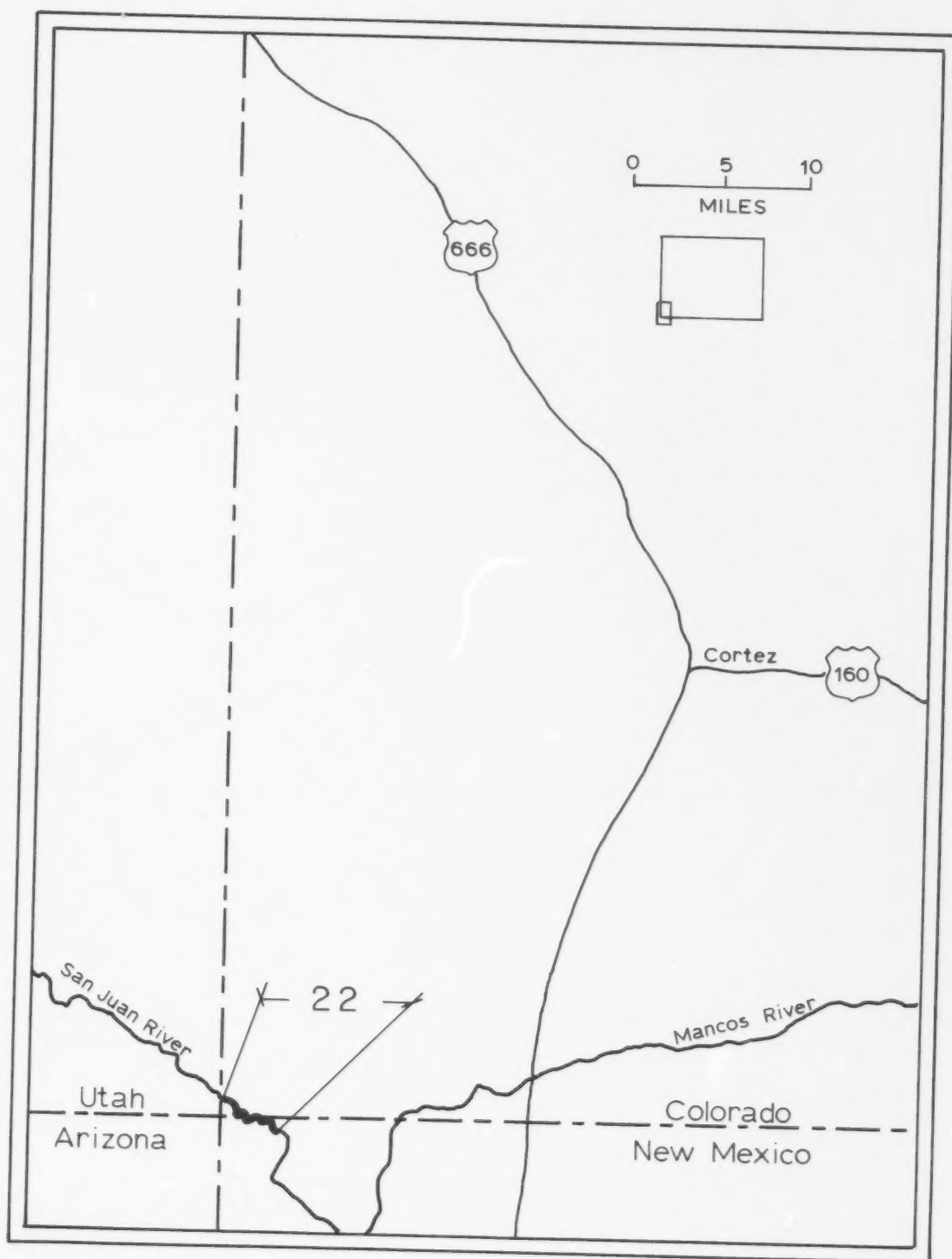


Figure 15. Capture Location Map for Colorado squawfish in the San Juan River in the extreme southwest corner of Colorado.

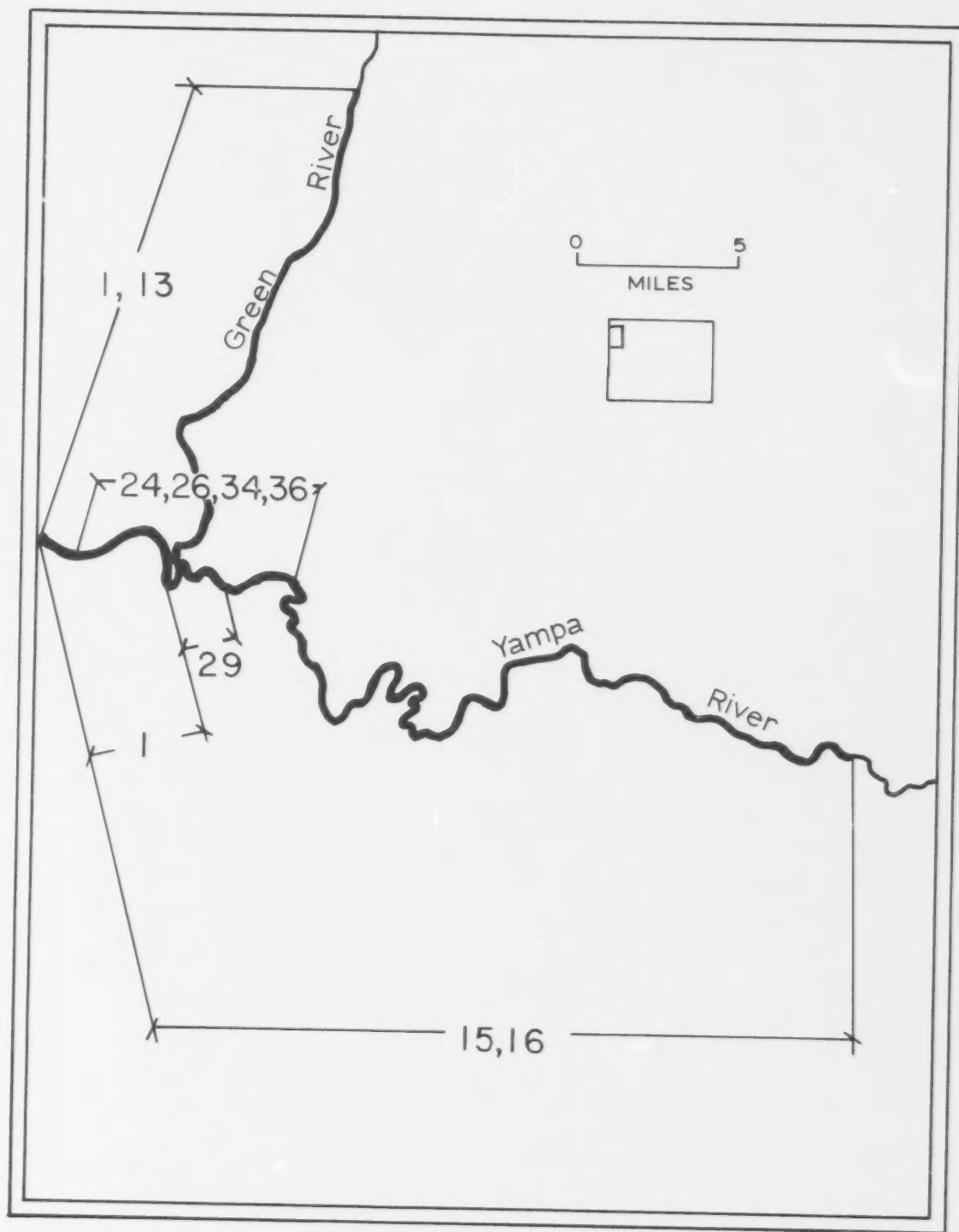


Figure 16. Capture Location Map for humpback sucker near the confluence of the Green and Yampa Rivers in Colorado.

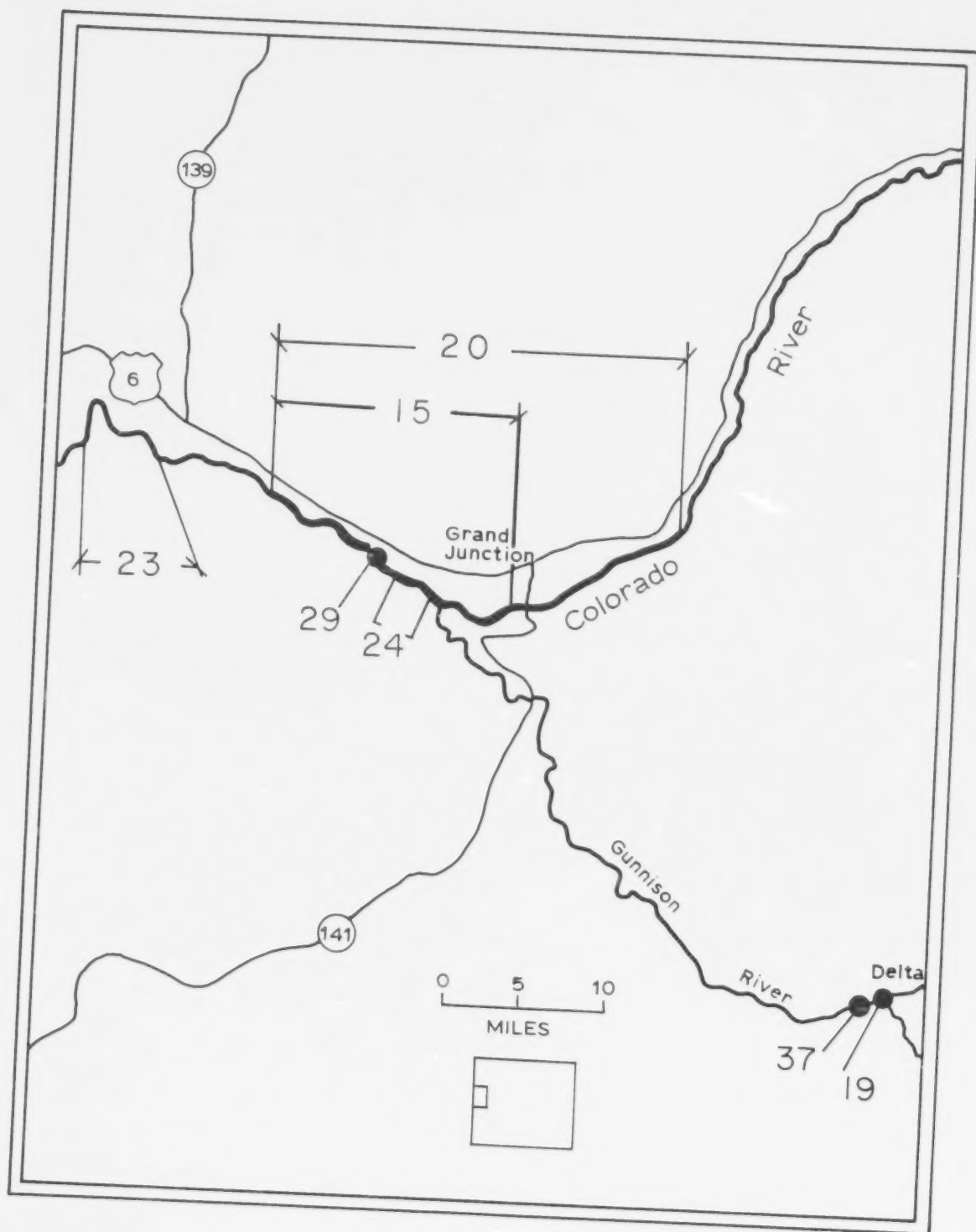


Figure 17. Capture Location Map for humpback sucker in the Colorado and Gunnison Rivers in western Colorado.

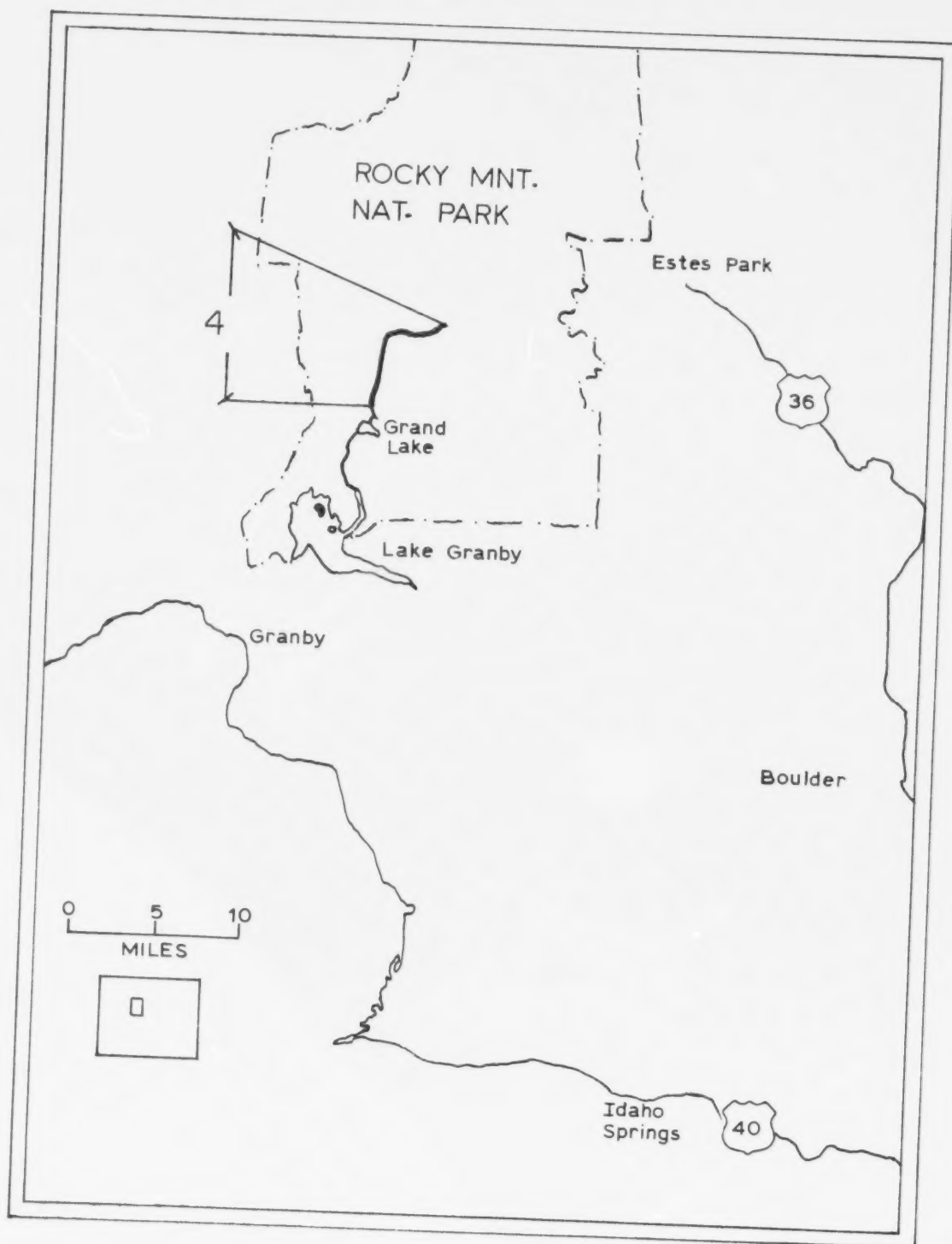


Figure 18. Capture Location Map for Colorado cutthroat trout in the headwaters of the Colorado River.

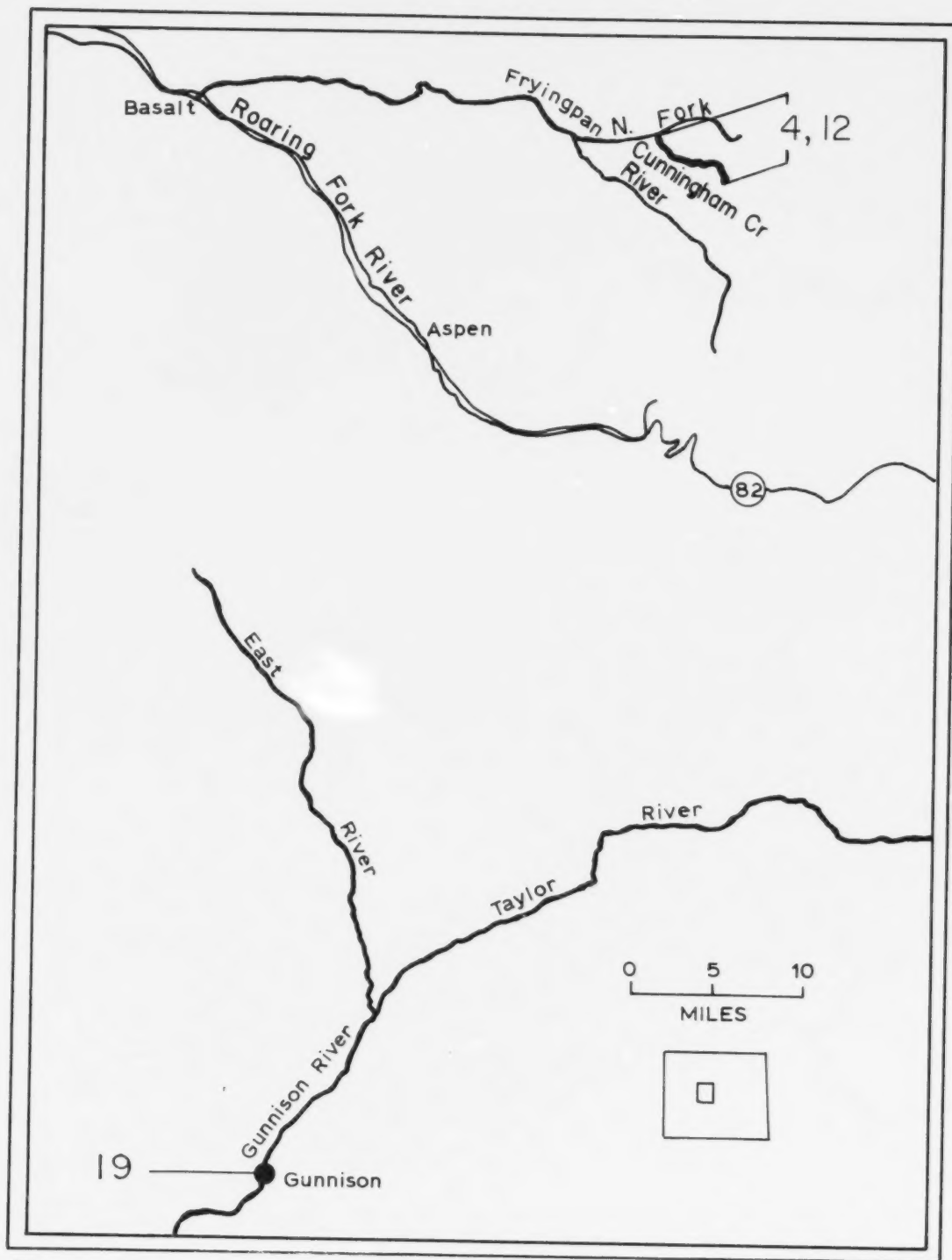


Figure 19. Capture Location Map for Colorado cutthroat trout in the upper Frying Pan drainage and upper Gunnison Rivers in Colorado.

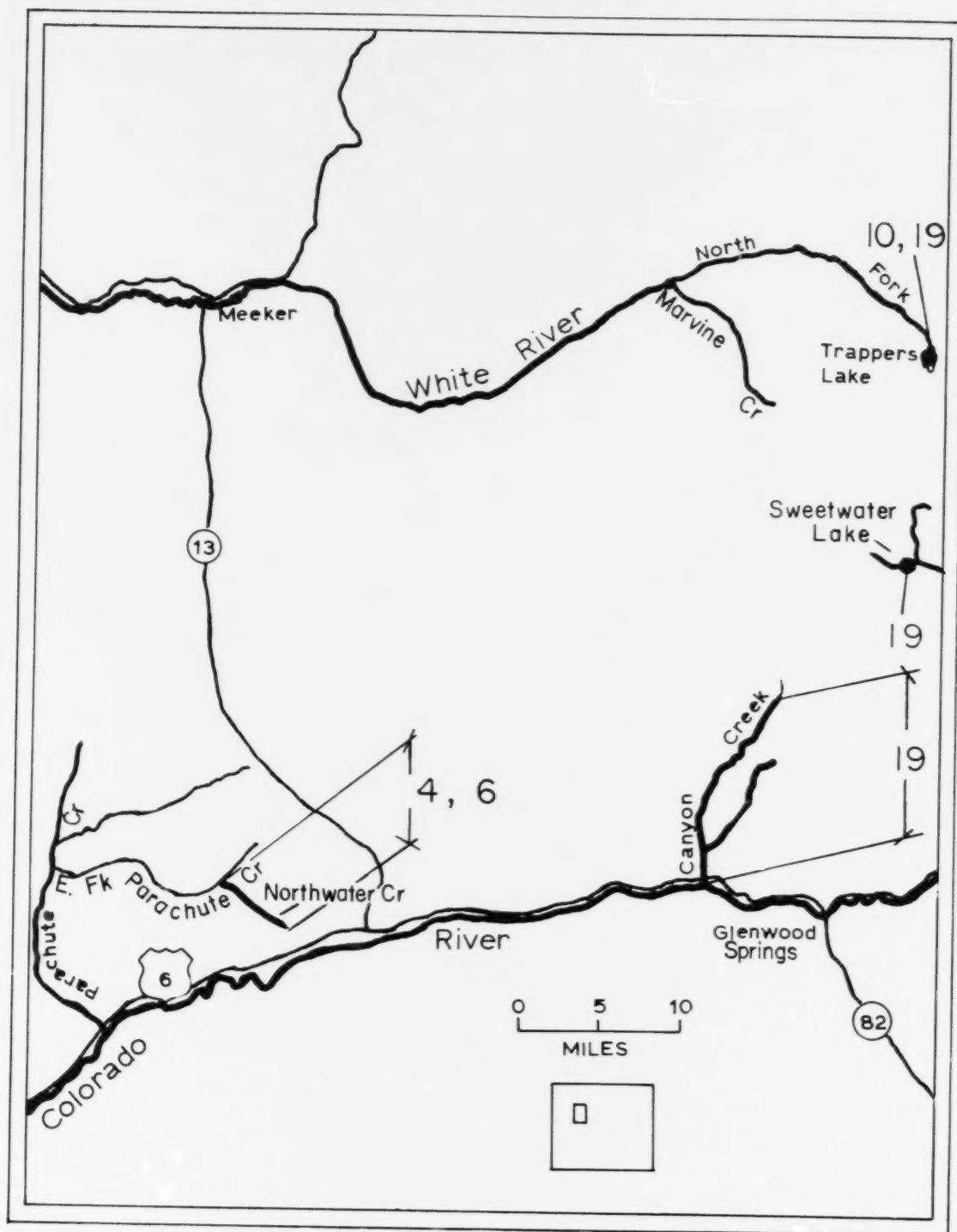


Figure 20. Capture Location Map for Colorado cutthroat trout in the headwaters of the White River and in tributaries to the Colorado River near Glenwood Springs, Colorado.

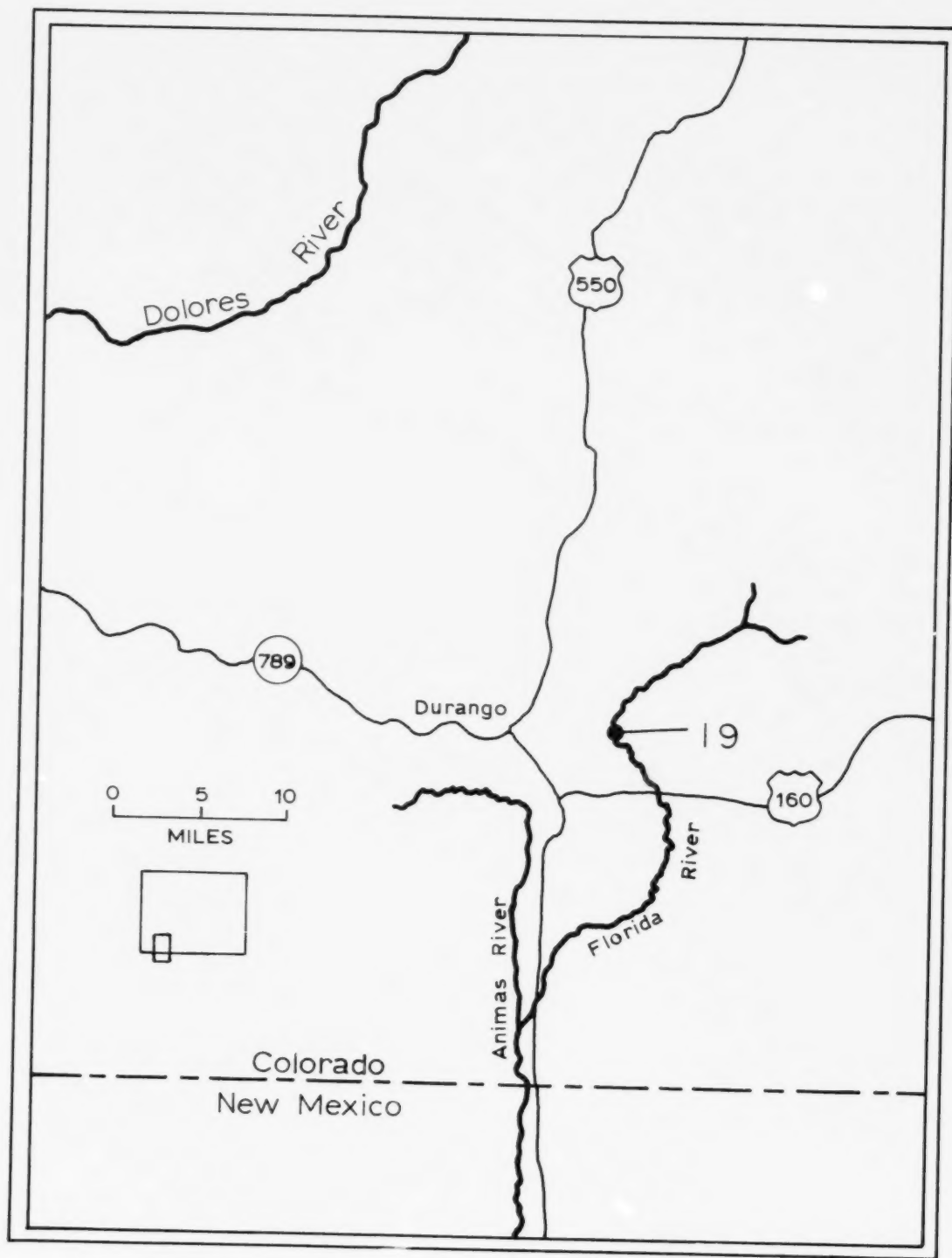


Figure 21. Capture Location Map for Colorado cutthroat trout in the Florida River near Durango, Colorado.

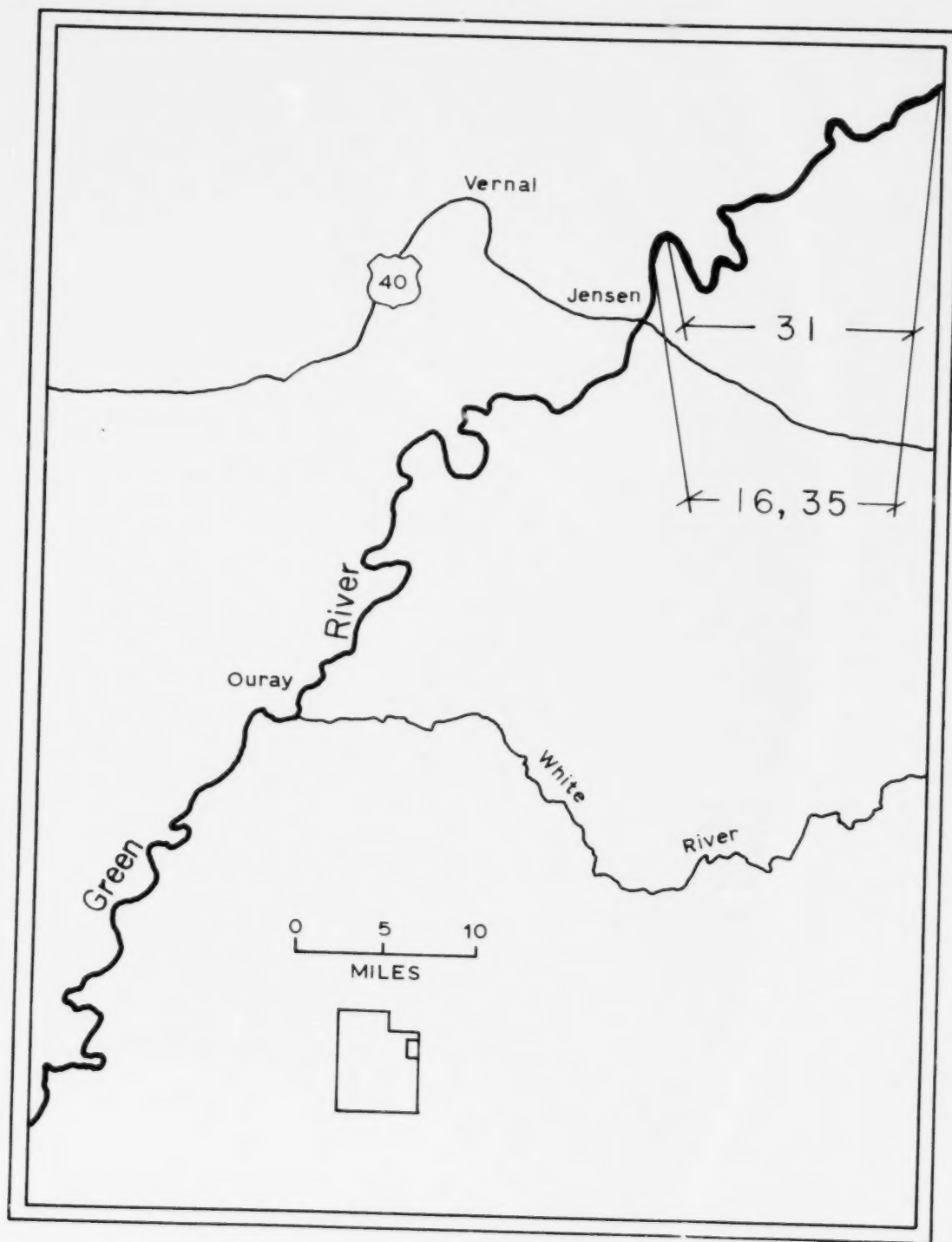


Figure 22. Capture Location Map for bonytail chub in the Green River near Jensen in Utah.

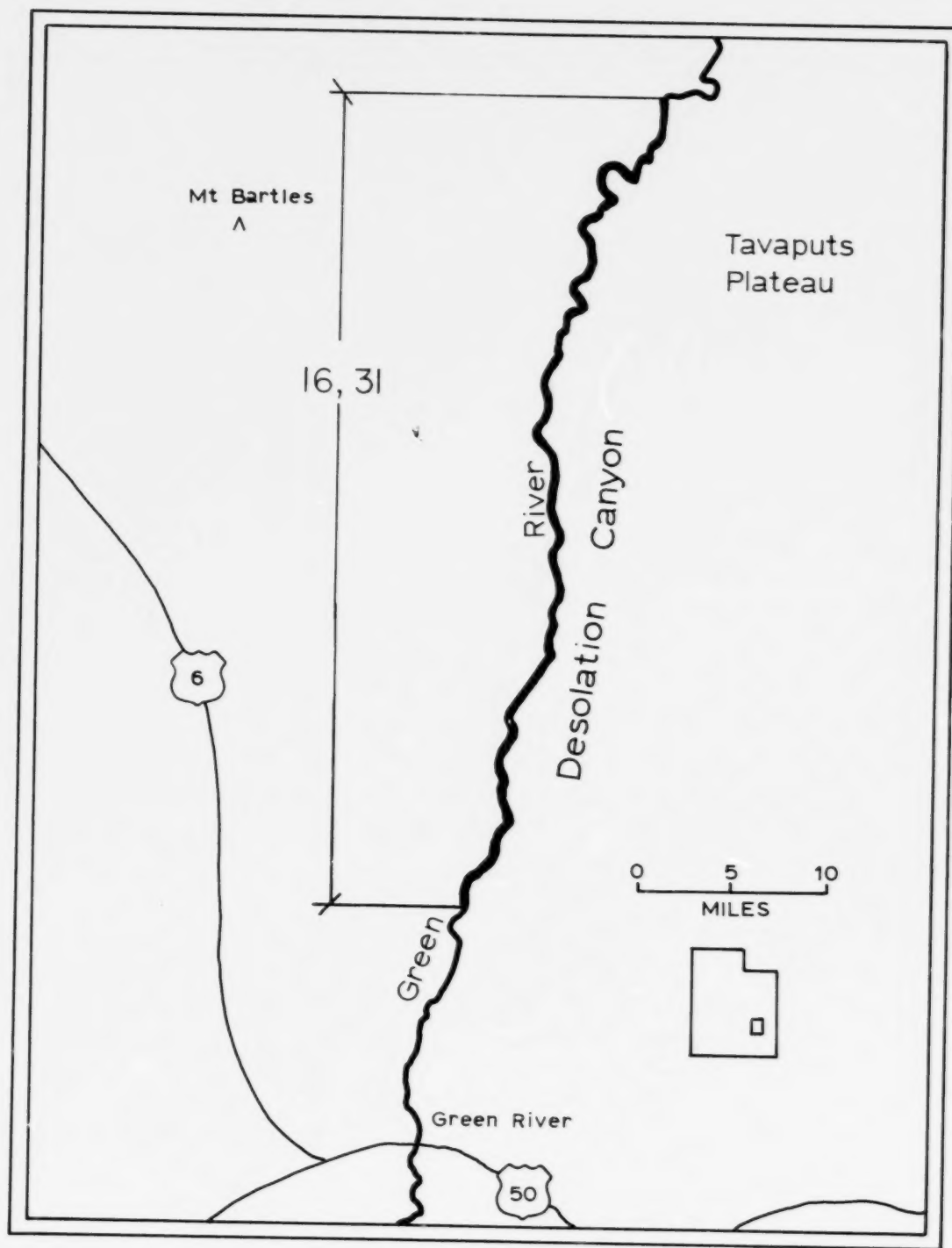


Figure 23. Capture Location Map for bonytail chub in Desolation Canyon of the Green River in Utah.

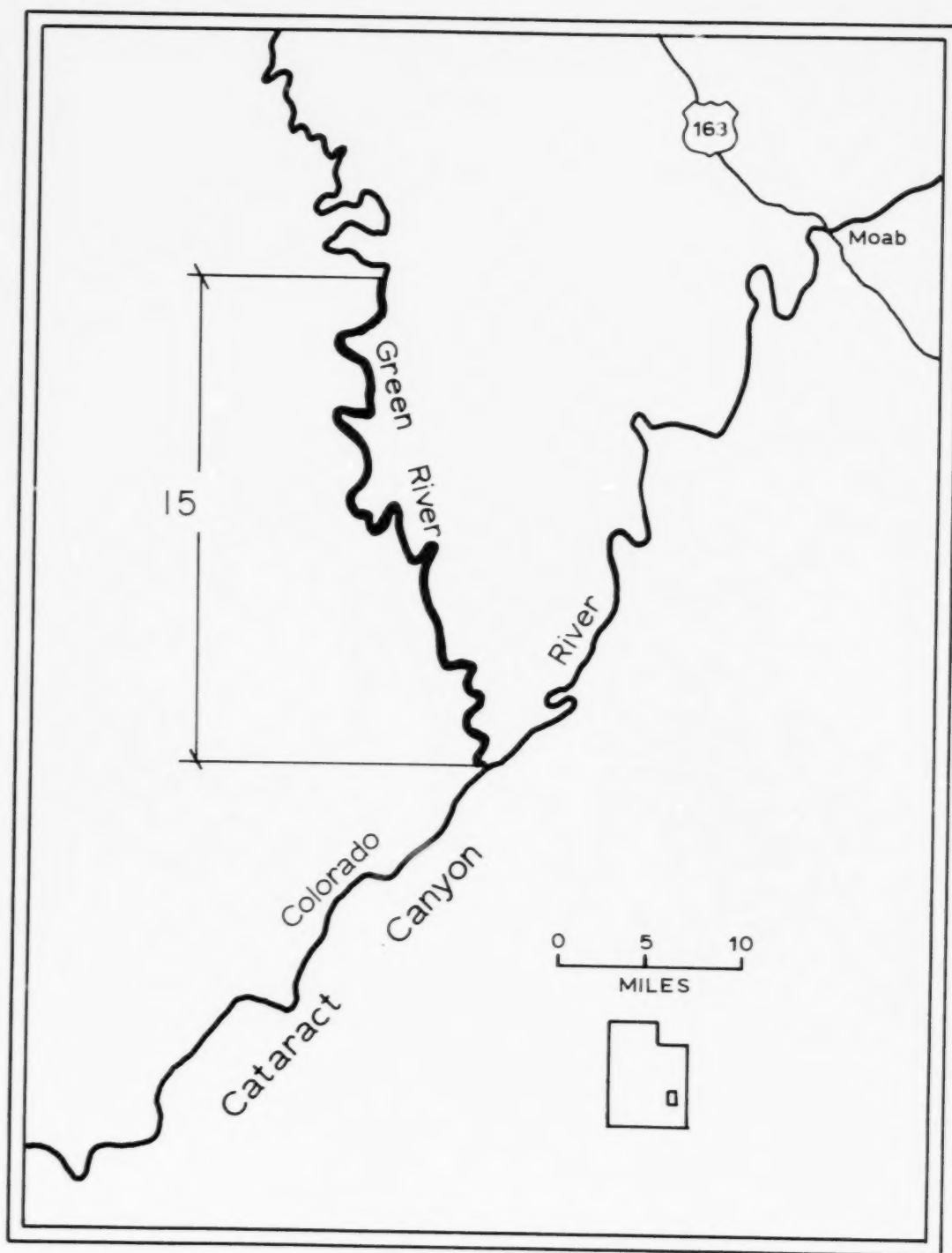


Figure 24. Capture Location Map for bonytail chub near the confluence of the Green and Colorado Rivers in Utah.

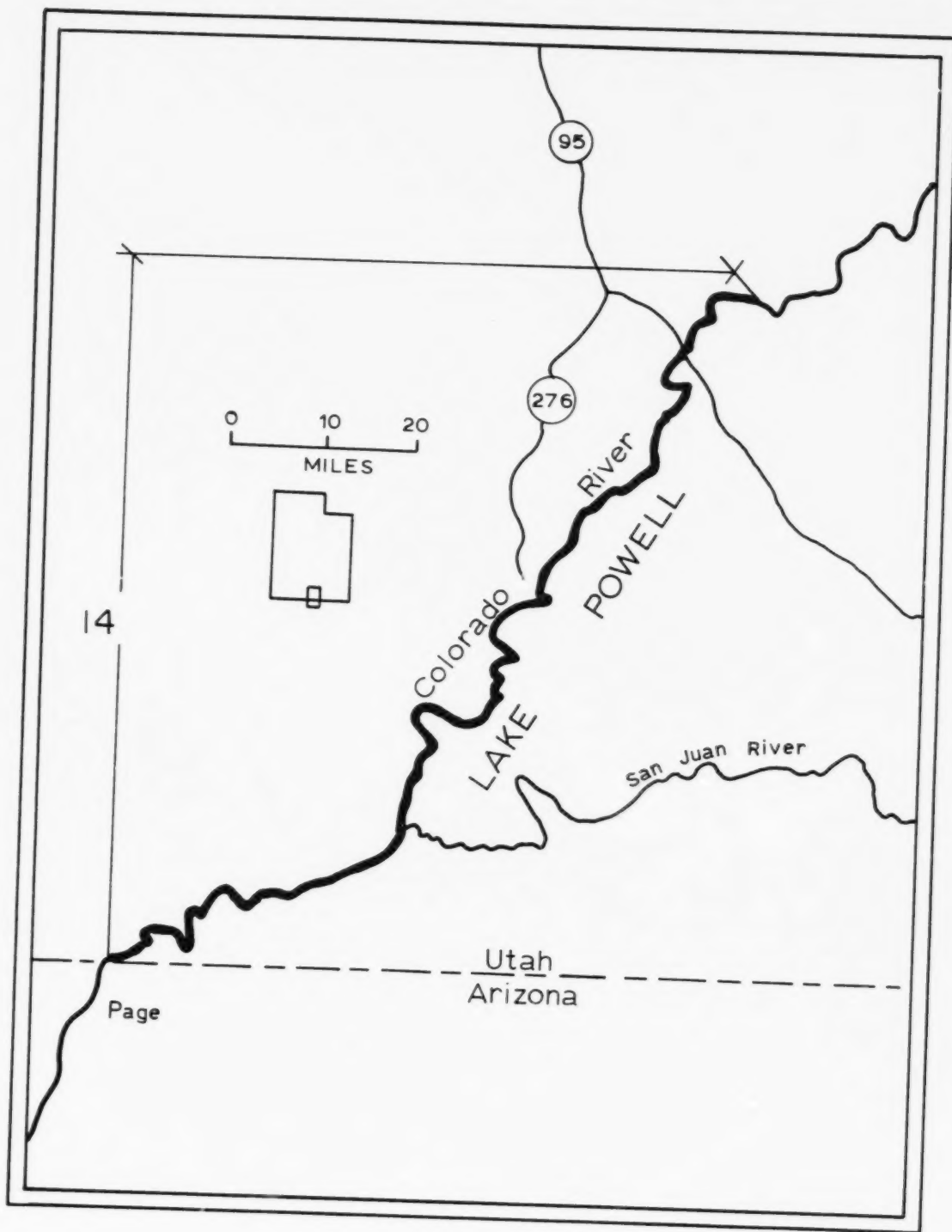


Figure 25. Capture Location Map for bonytail chub in the vicinity of Lake Powell on the Colorado River in Utah.

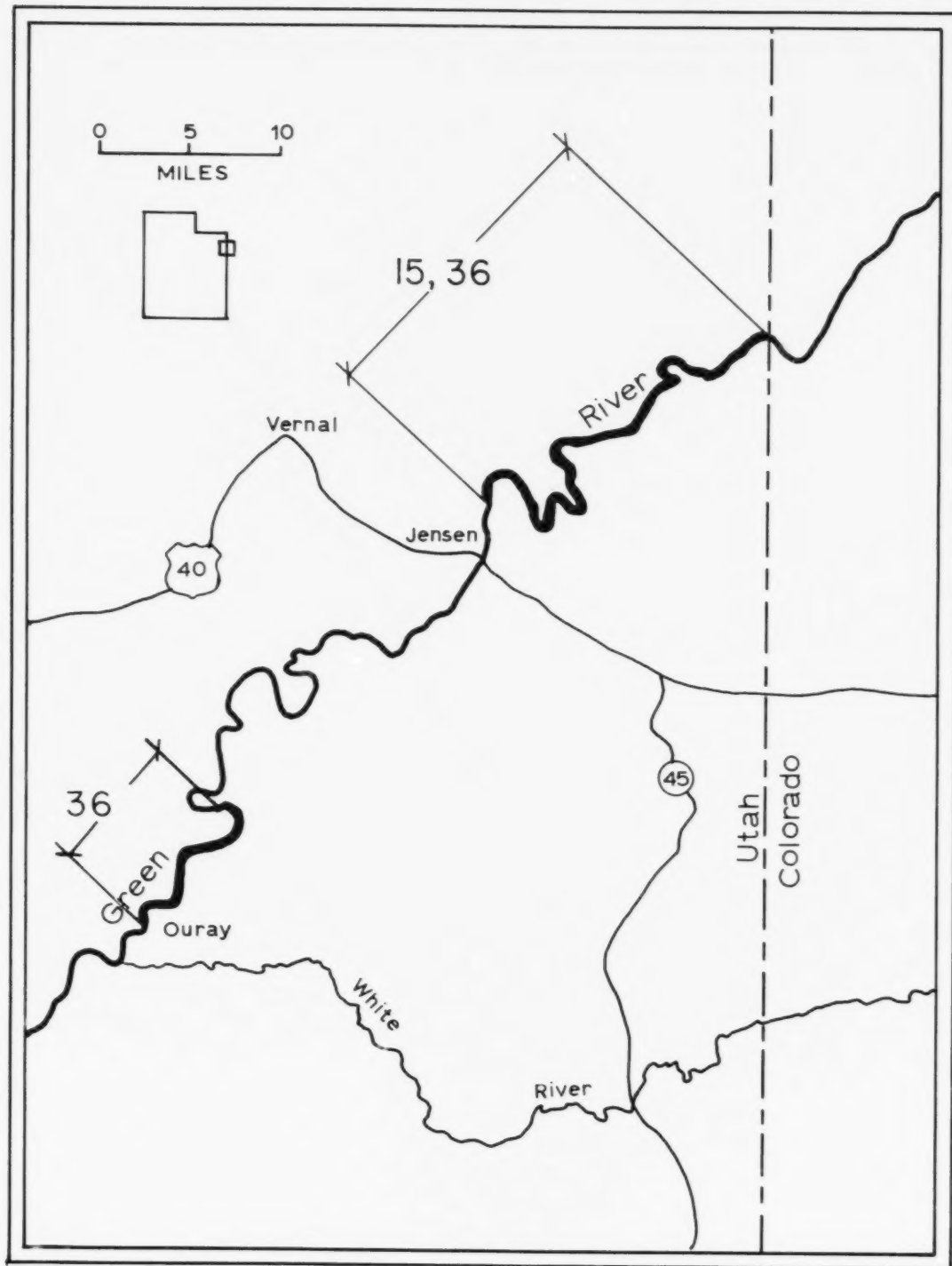


Figure 26. Capture Location Map for humpback chub in the Green River near Jensen and Ouray in Utah.

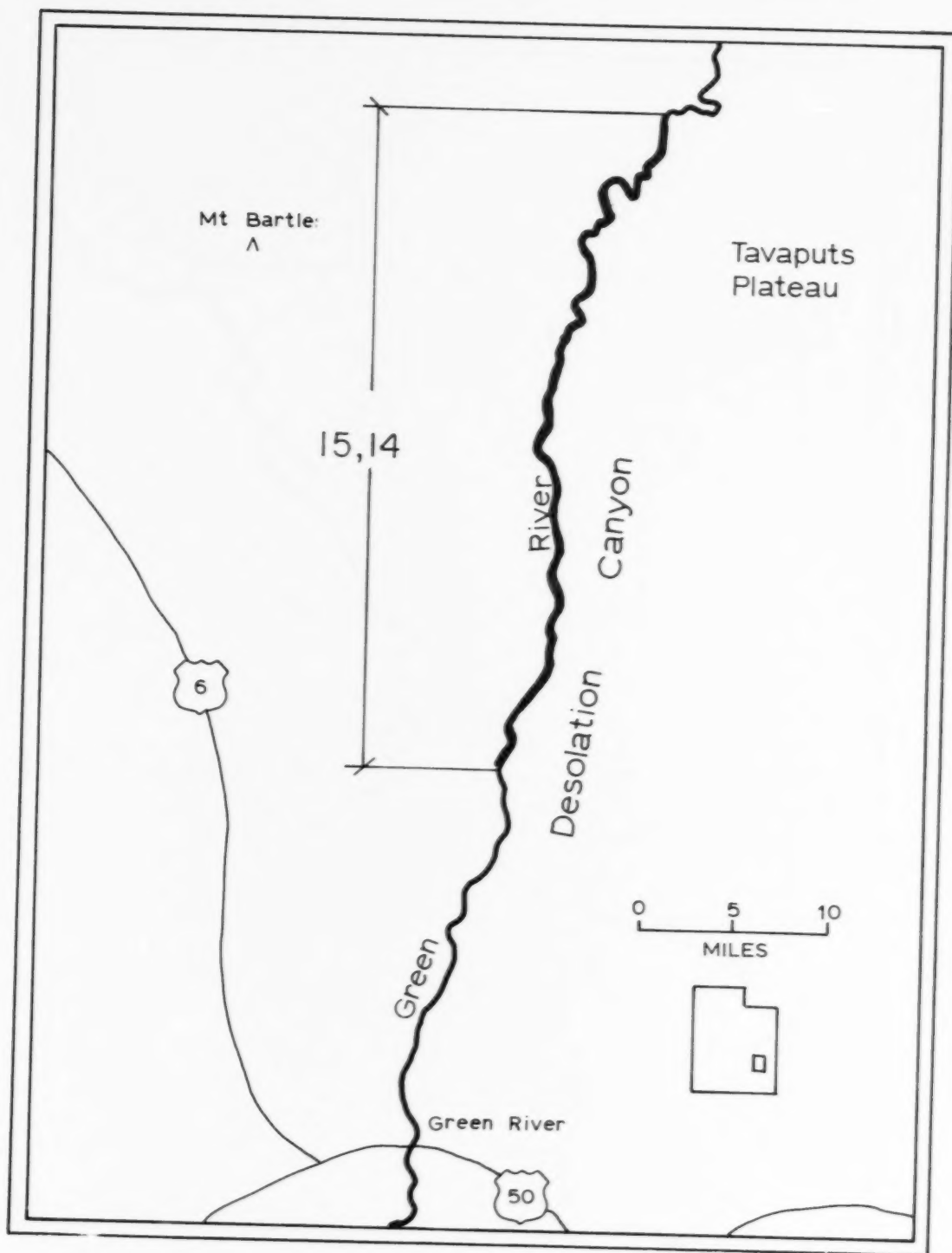


Figure 27. Capture Location Map for humpback chub in the Desolation Canyon of the Green River in Utah.

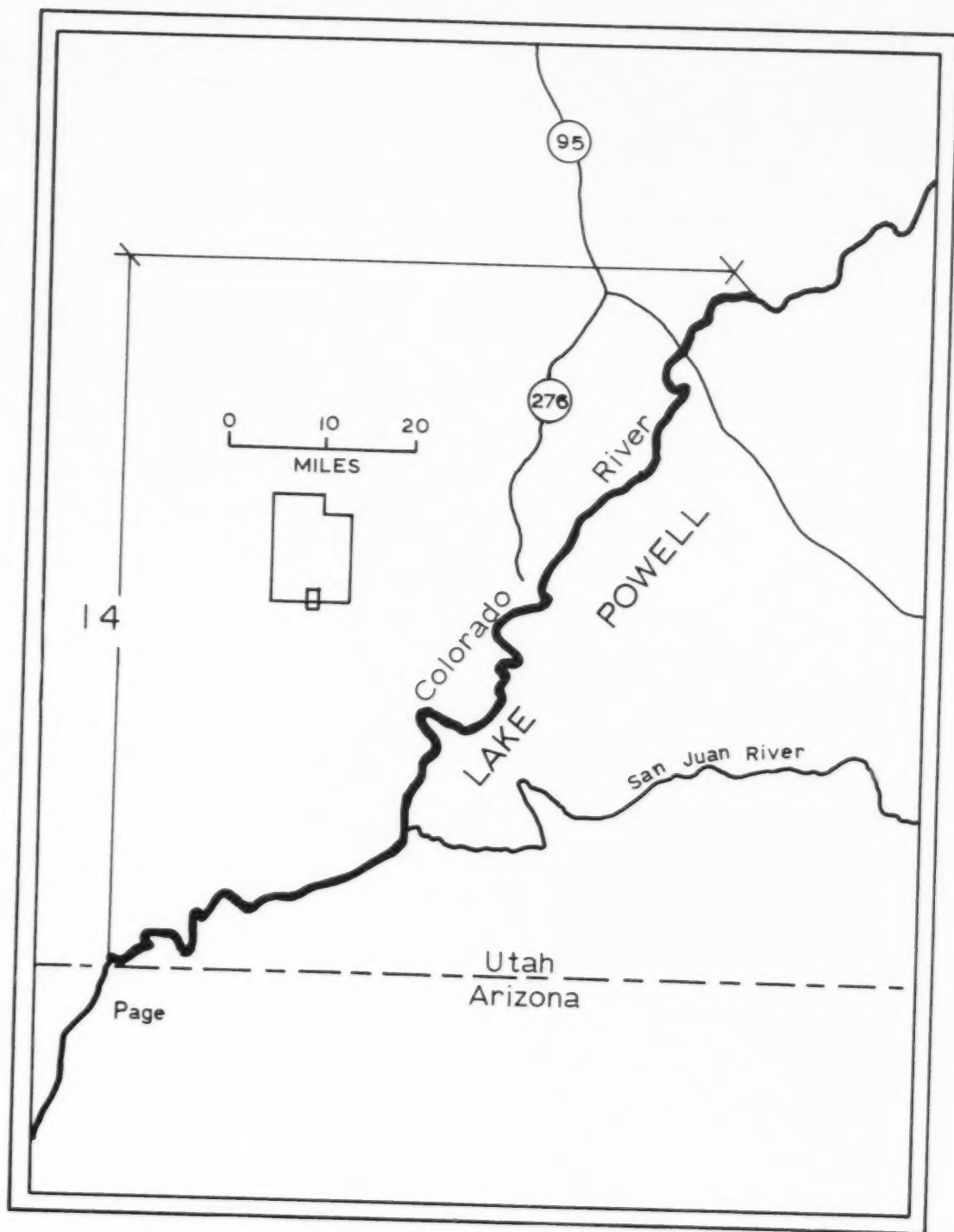


Figure 28. Capture Location Map for humpback chub in the Colorado River in the vicinity of Lake Powell in Utah.

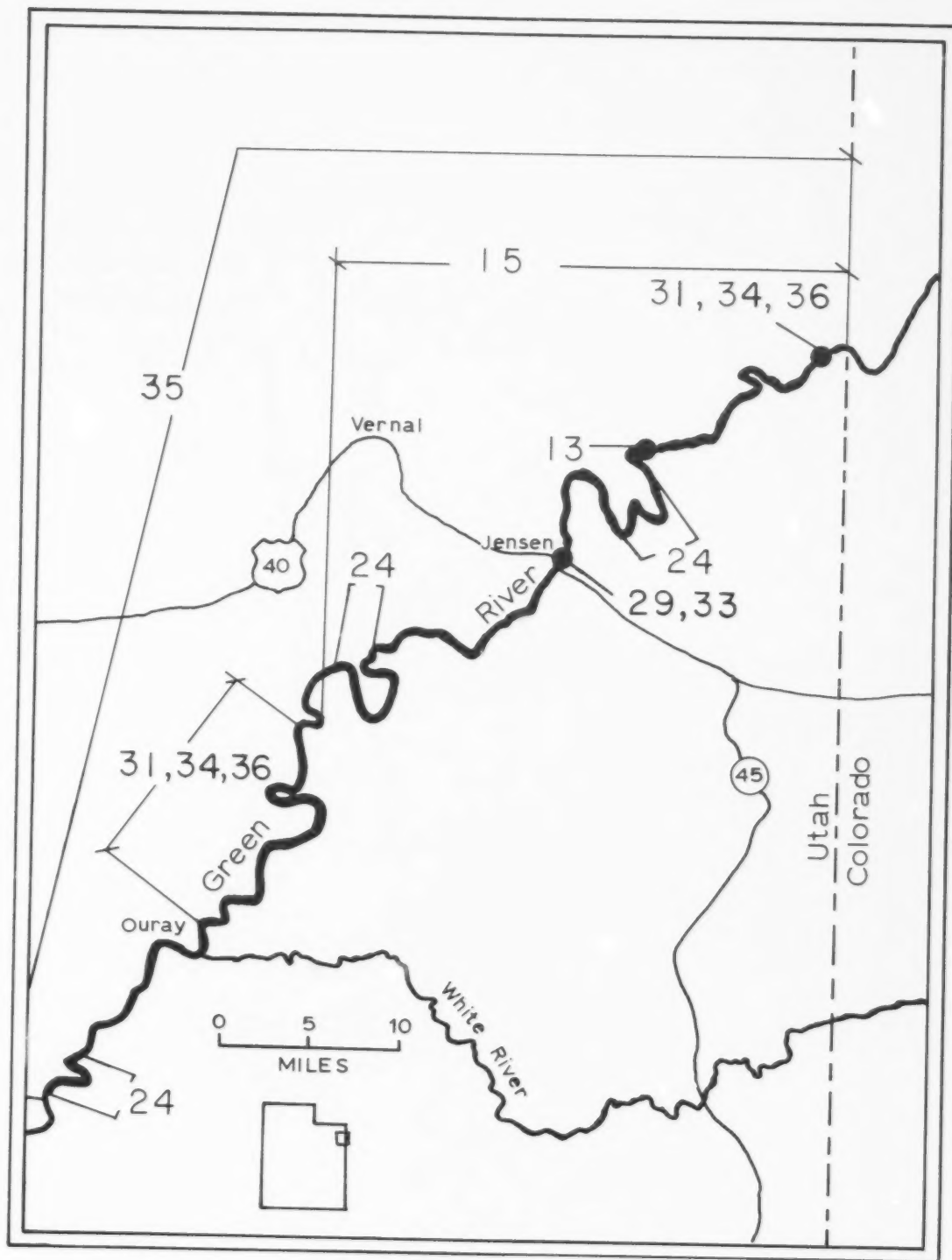


Figure 29. Capture Location Map for Colorado squawfish in the Green River in the vicinity of Jensen and Ouray in Utah.

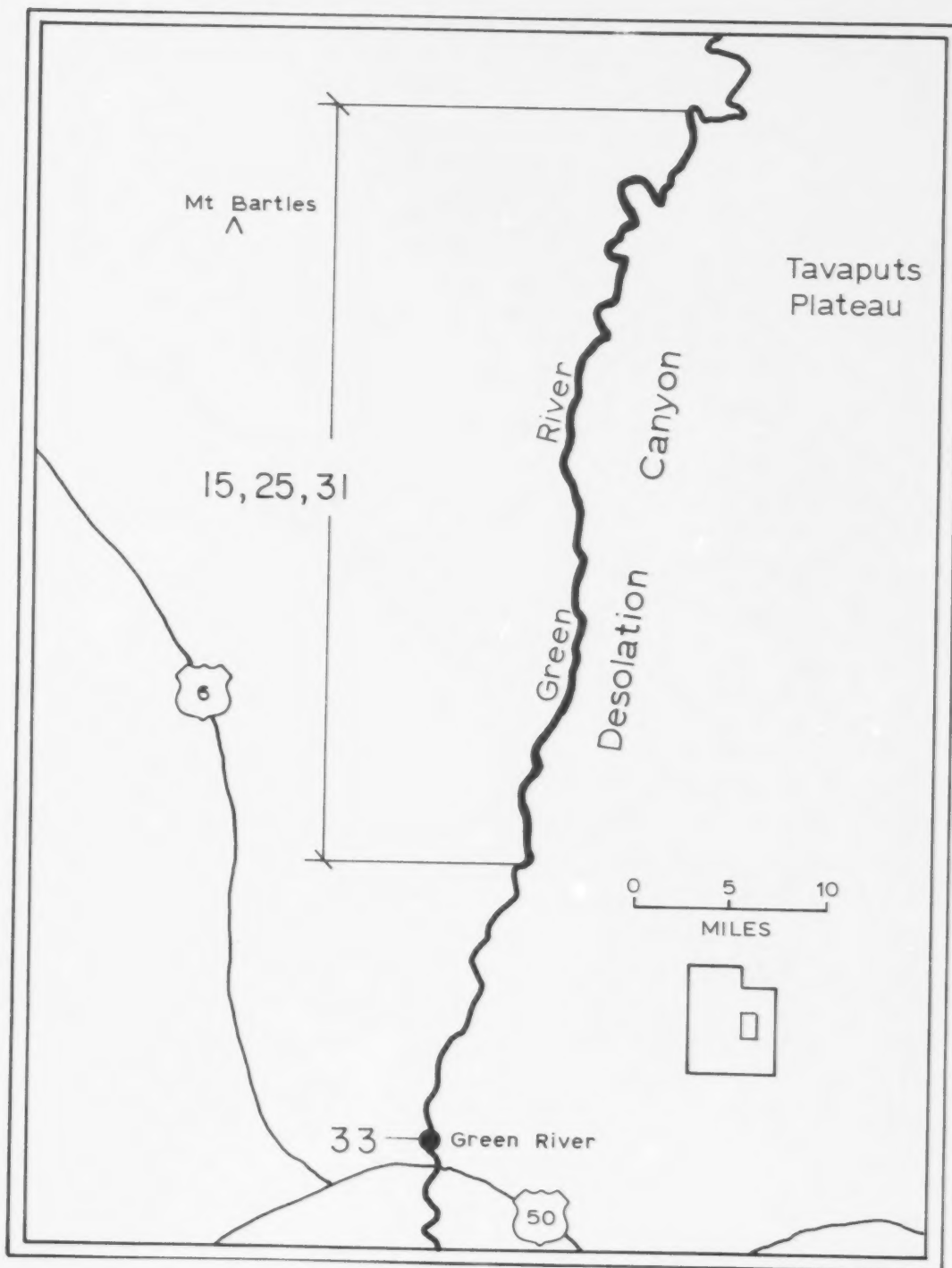


Figure 30. Capture Location Map for Colorado squawfish in the Desolation Canyon of the Green River in Utah.

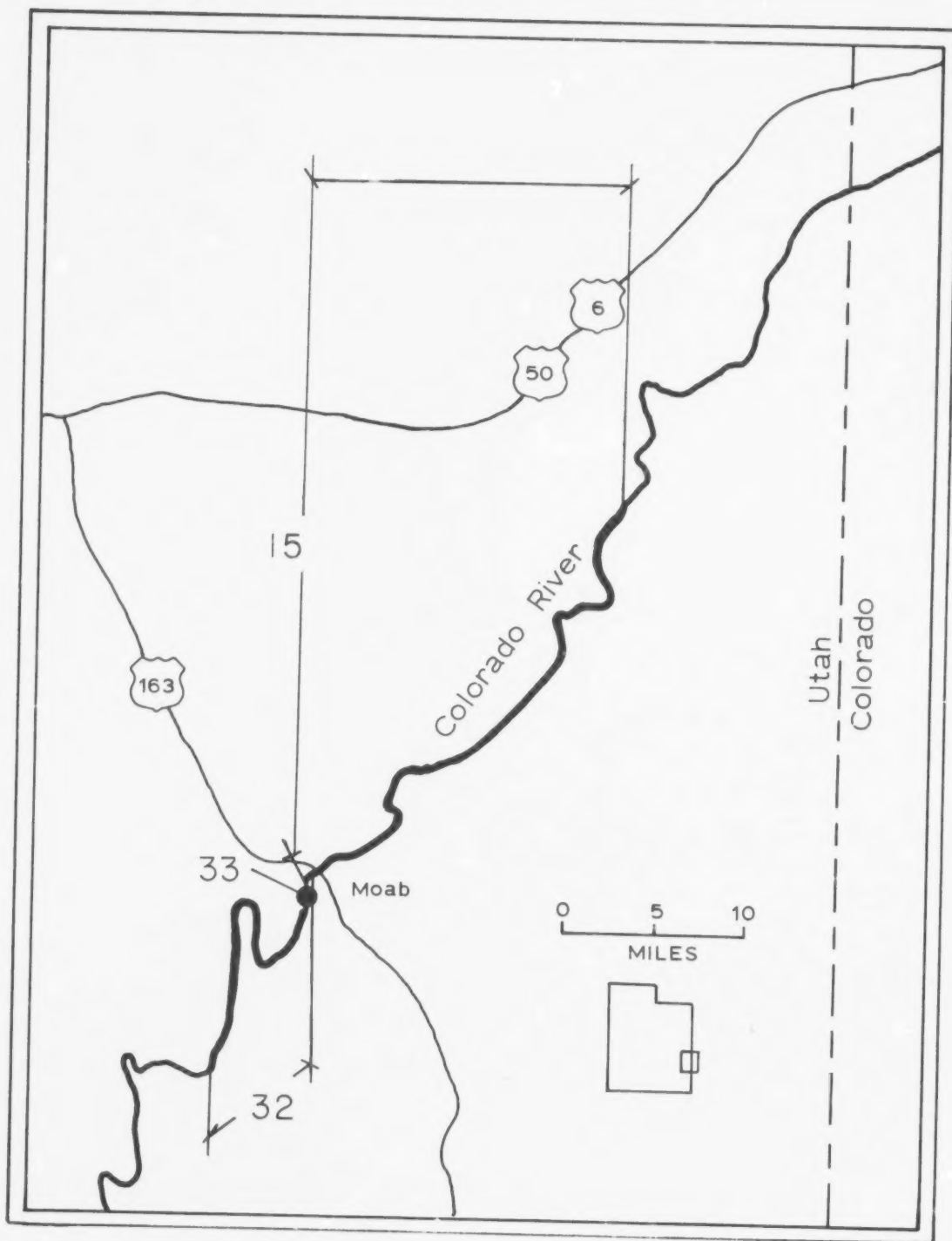


Figure 31. Capture Location Map for Colorado squawfish in the Colorado River near Moab, Utah.

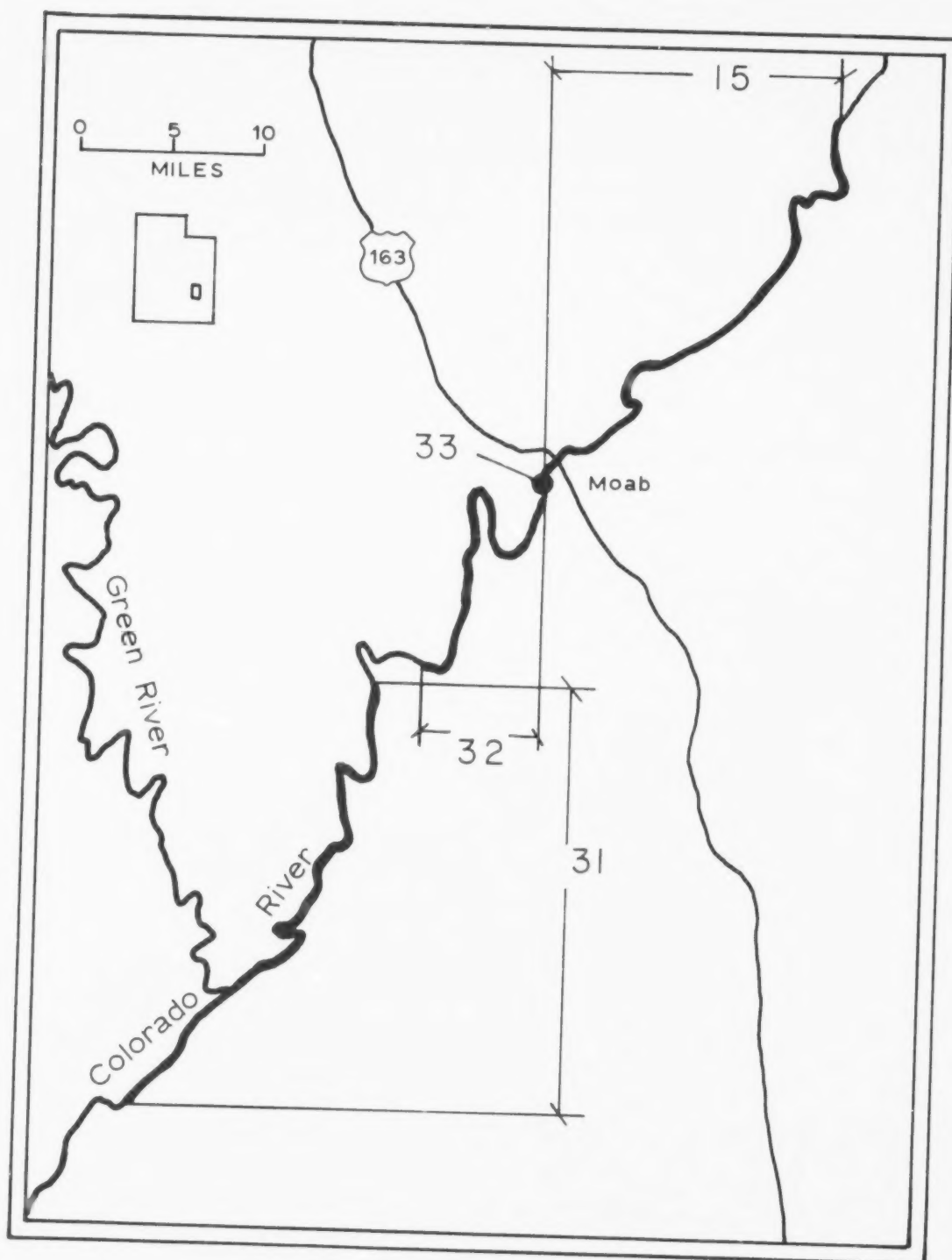


Figure 32. Capture Location Map for Colorado squawfish in the Colorado River near its confluence with the Green River in Utah.

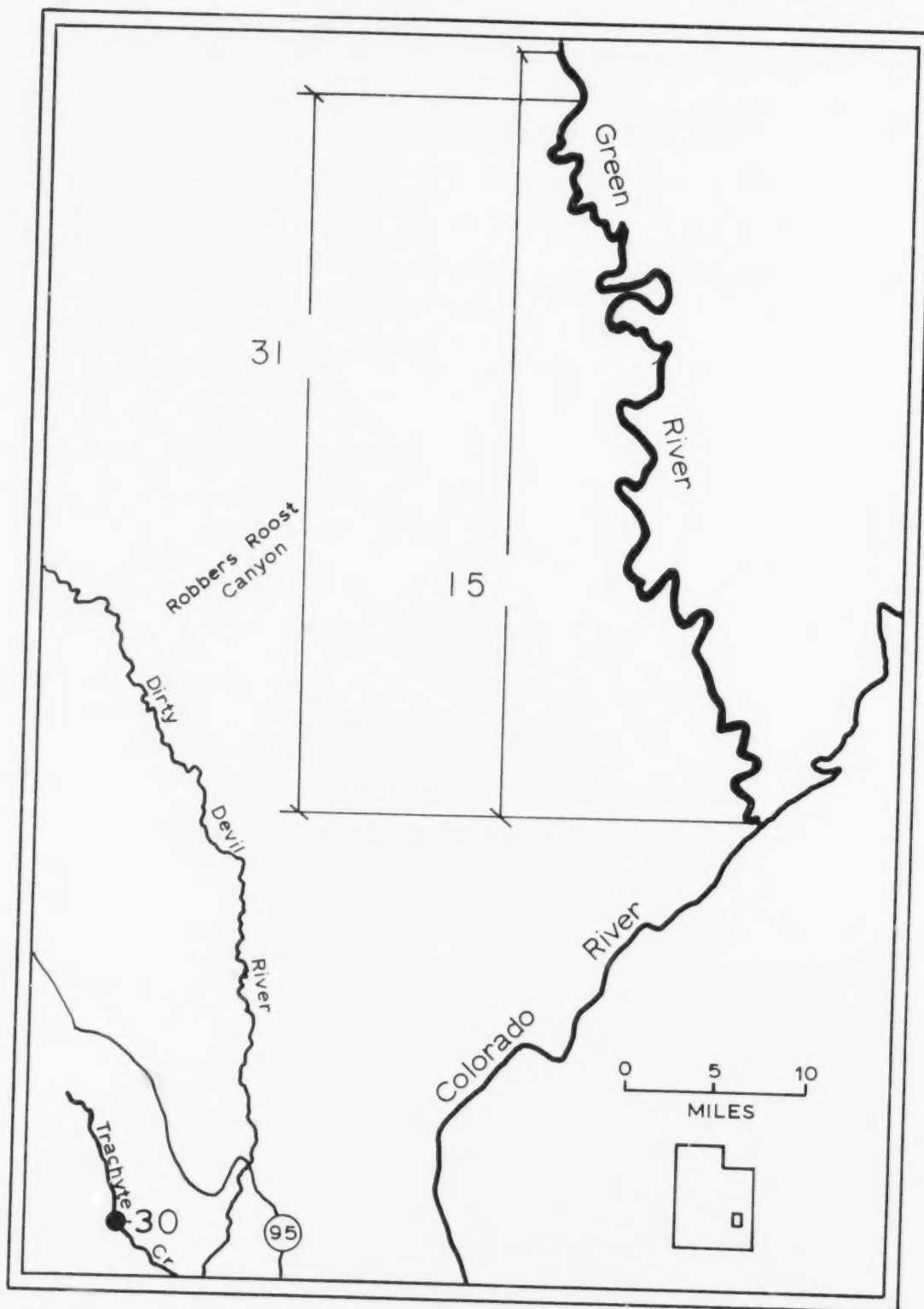


Figure 33. Capture Location Map for Colorado squawfish in the lower Green River and Trachyte Creek in southeastern Utah.

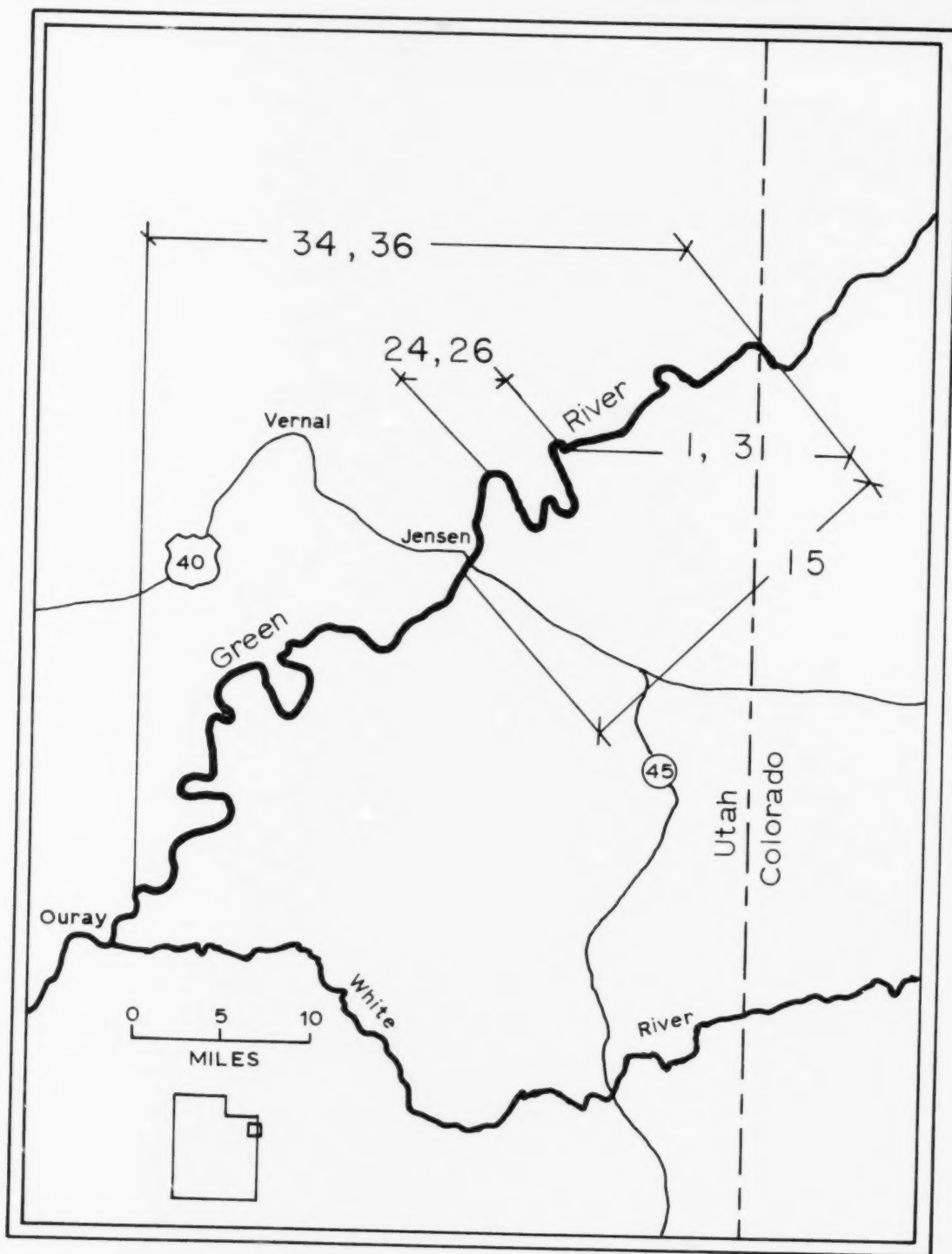


Figure 34. Capture Location Map for humpback sucker in the Green River of Utah in the vicinity of Jensen and Ouray.

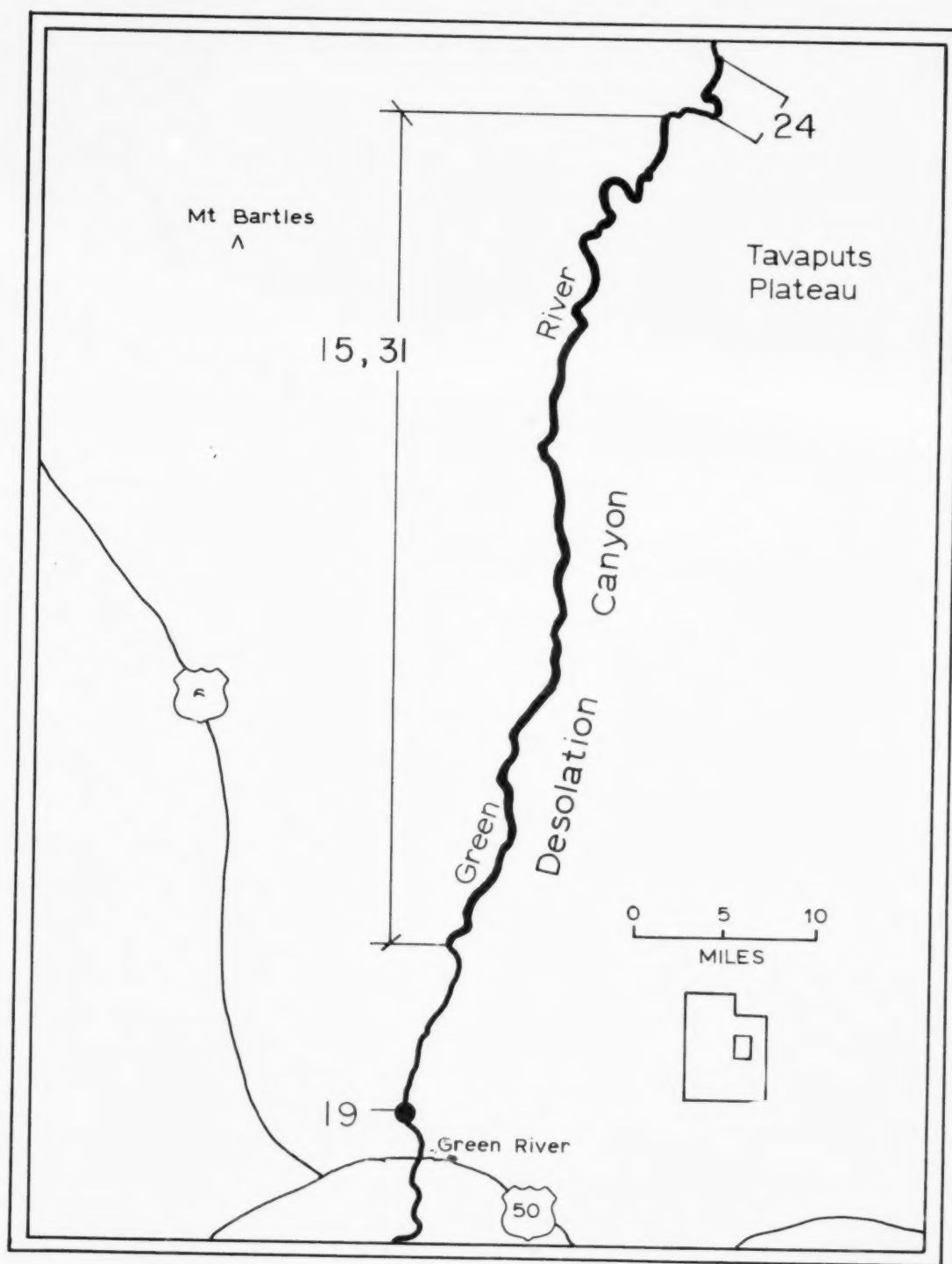


Figure 35. Capture Location Map for humpback sucker in the Desolation Canyon of the Green River in Utah.

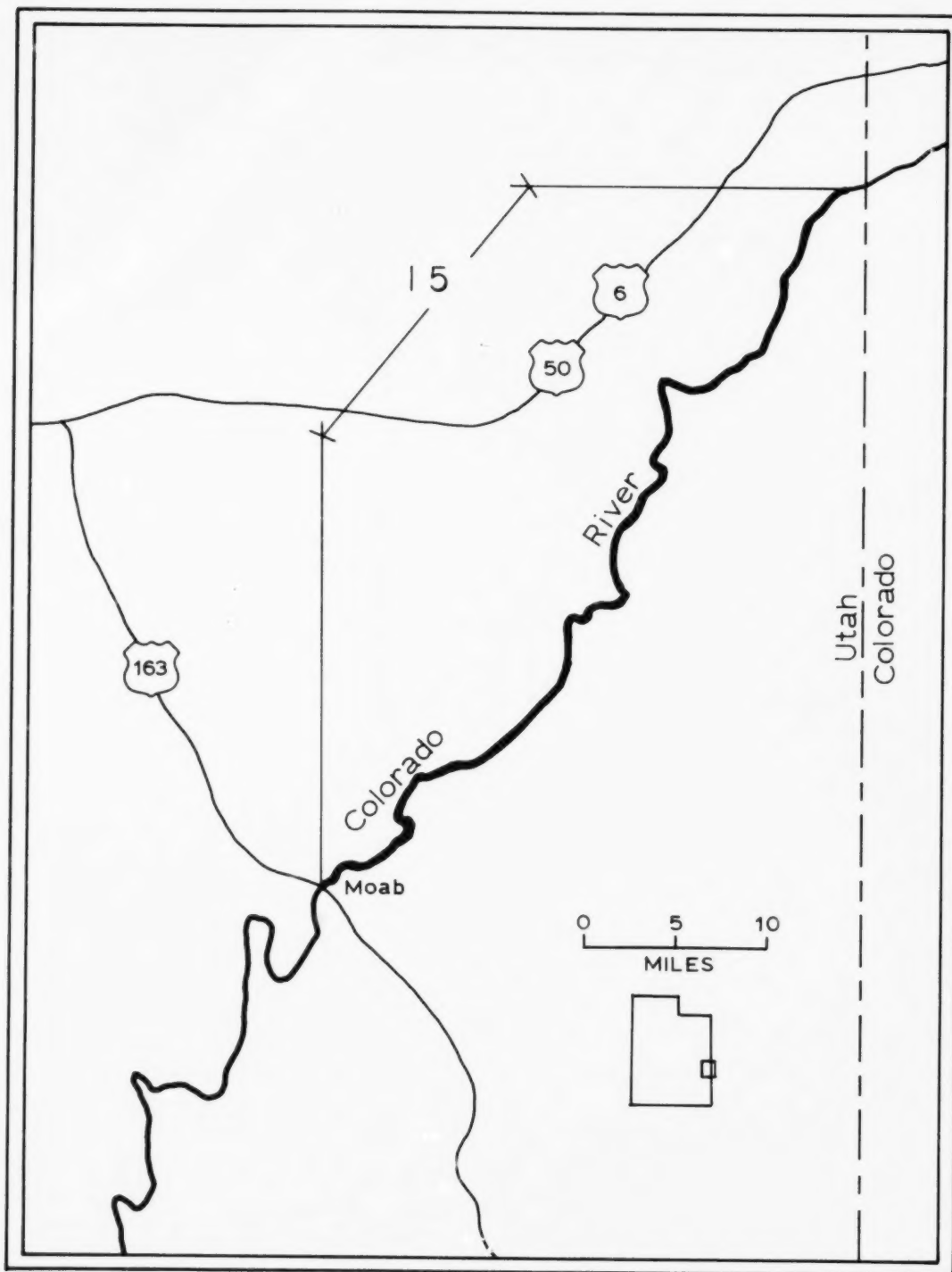


Figure 36. Capture Location Map for humpback sucker in the Colorado River, upstream from Moab, Utah.

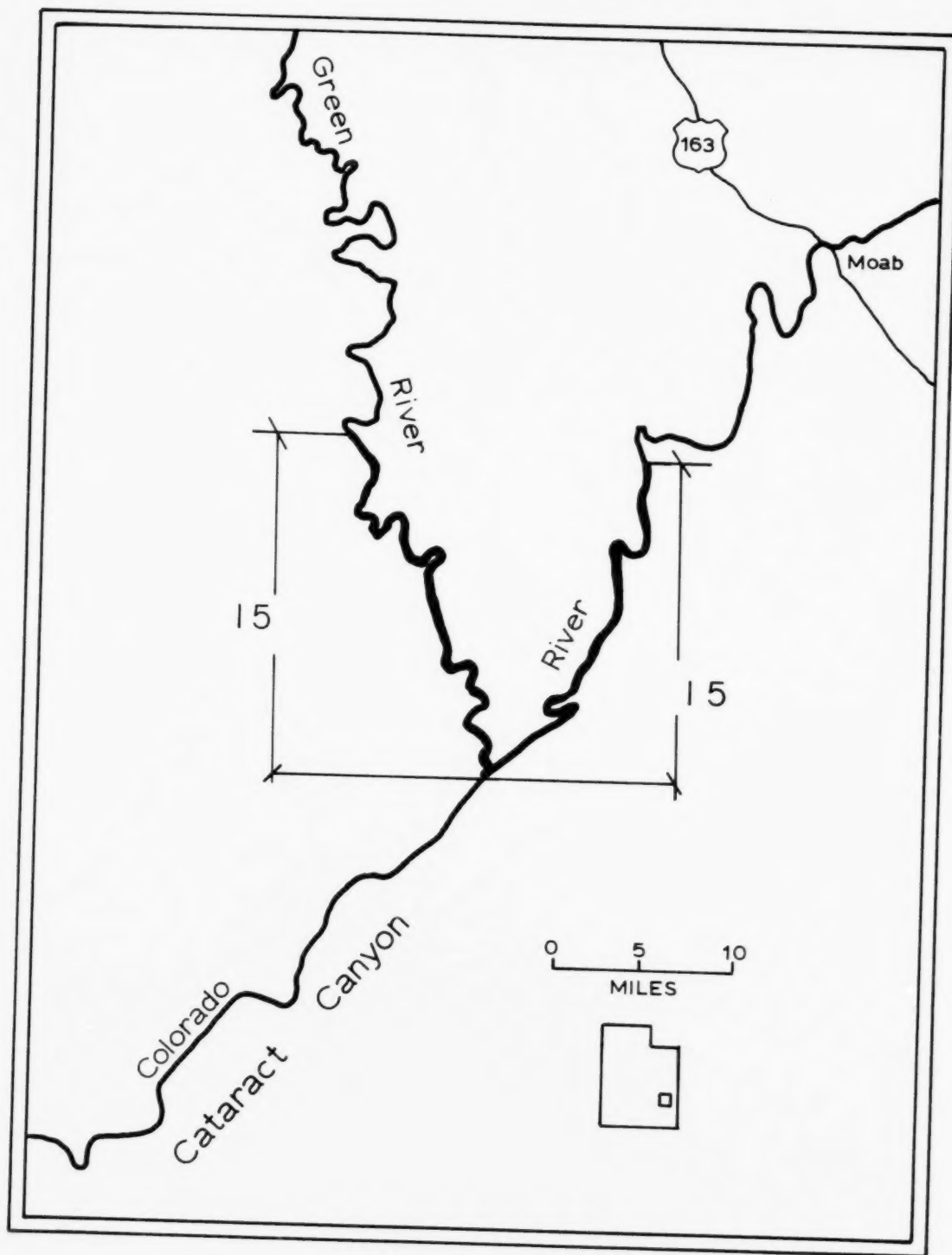


Figure 37. Capture Location Map for humpback sucker near the confluence of the Green and Colorado Rivers in Utah.

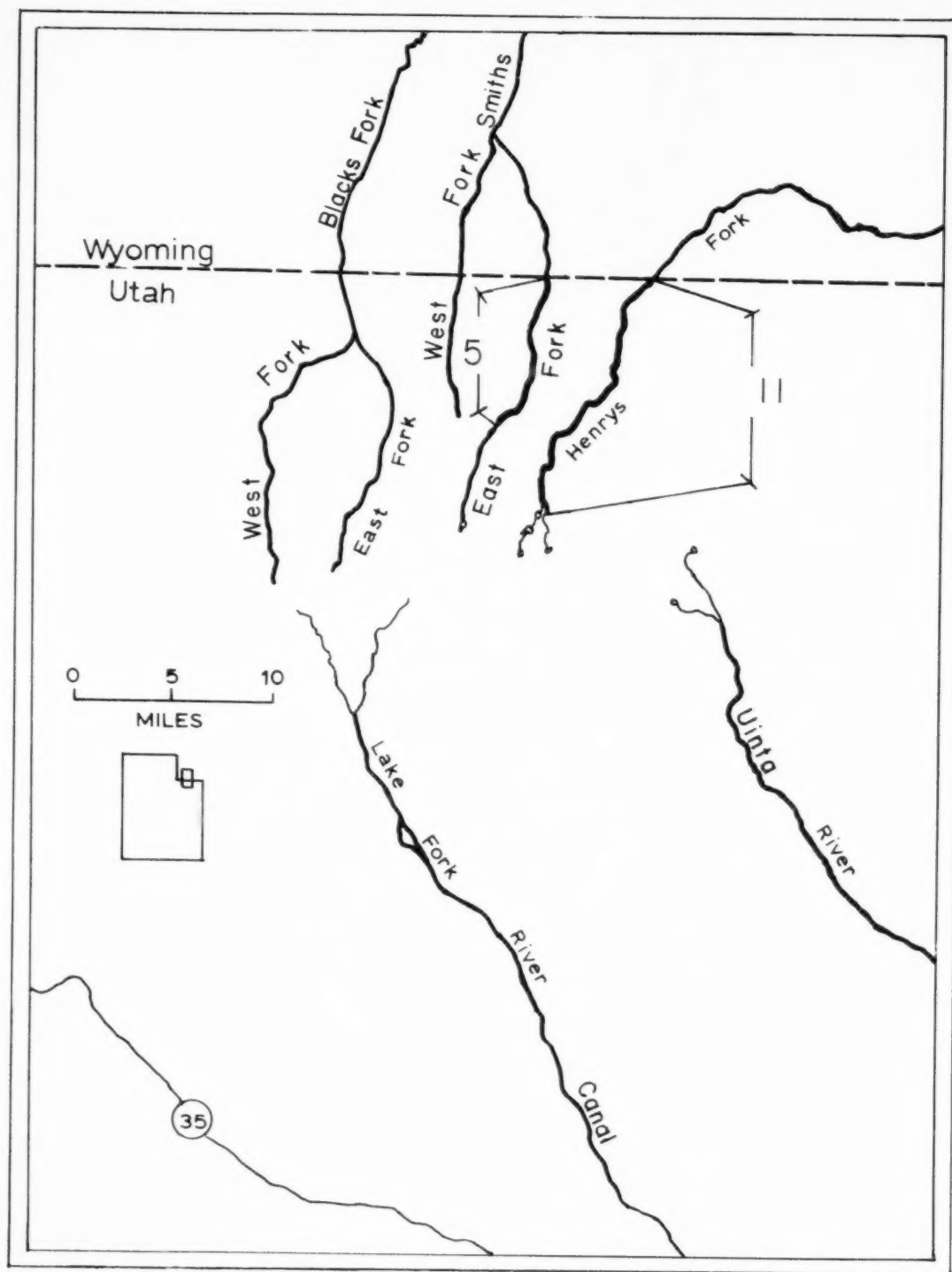


Figure 38. Capture Location Map for Colorado cutthroat trout in the Uinta Mountains of northeastern Utah.

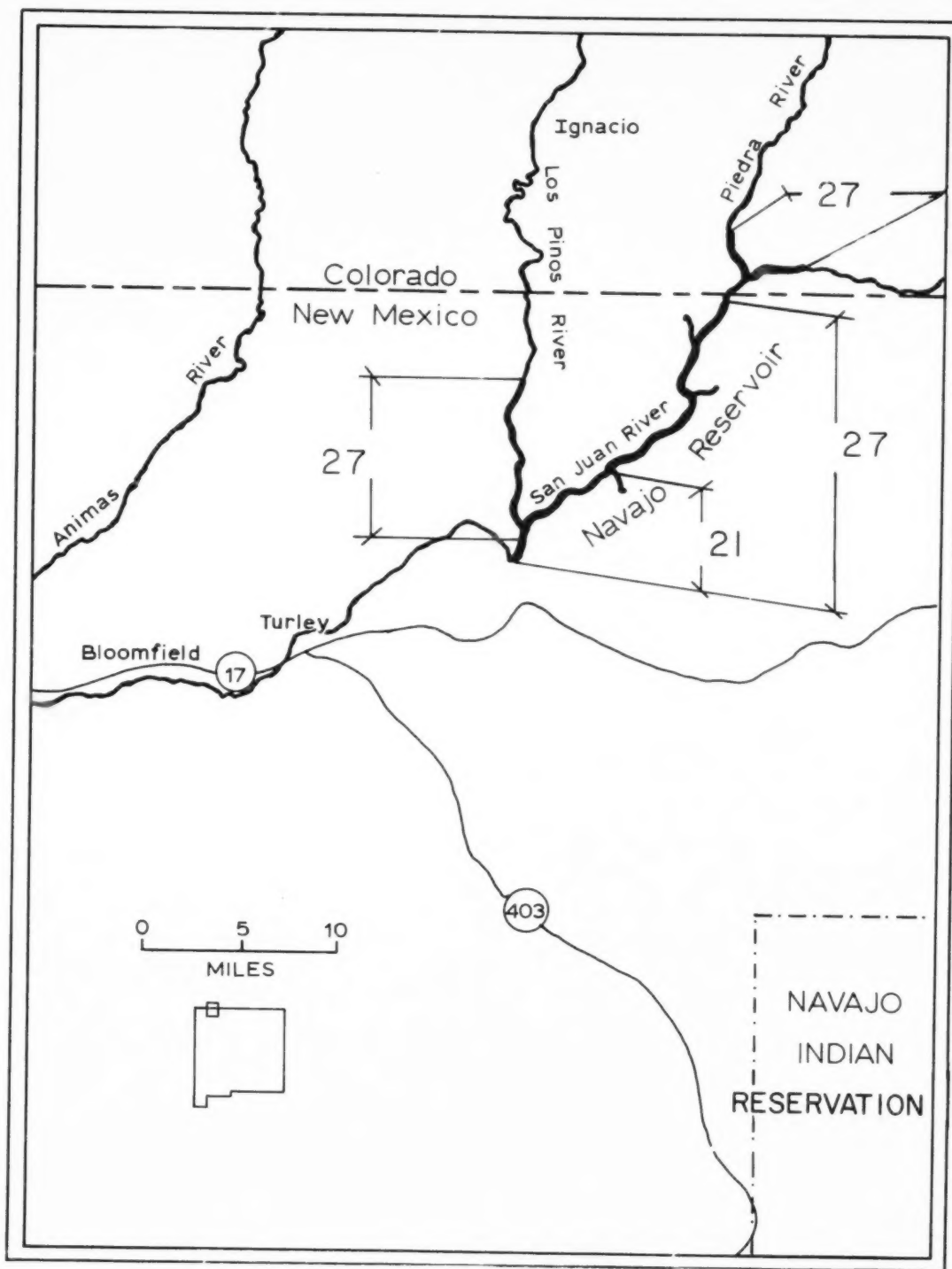


Figure 39. Capture Location Map for Colorado squawfish in the Piedra River area of Colorado and the Los Pinos and San Juan Rivers of New Mexico.

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B293  
9

## U. S. Department of the Interior

## Fish and Wildlife Service

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